TECHNICAL FIRE DIRECTION - MLRS OPERATIONS For AFATDS V6.3.1.0

FINAL

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REVISION STATUS SHEET
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TECHNICAL FIRE DIRECTION - MLRS OPERATIONS
For
AFATDS V6.3.1.0

Rev.	Date	Description of Change
Final	31 Oct 02	TB 11-7025-354-10-3, replaces all previous Job Aids which were related to AFATDS MLRS Operations. This version incorporates new V6.3.1.0 functionality

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How to Use This Manual.

Use. This manual is intended for use as a detailed reference for specific fire direction tasks performed at firing battery and platoon FDCs. This manual applies to Multiple Launch Rocket System (MLRS) firing rockets or the Army Tactical Missile System (ATACMS) units.

1. **Design**. The manual is constructed in chapters related to specific task areas and functions that the AFATDS operator must perform. These chapters are:
   - **a. Chapter 1. Prepare the AFATDS to conduct MLRS Operations.** Chapter 1 provides the Setup to support the Database with, Unit, Geometry, Communications, and Guidance information to conduct MLRS operations.
   - **b. Chapter 2. Fire Mission Processing.** Chapter 2 contains detailed descriptions of the AFATDS fire mission process followed by specific fire mission processing tasks.
   - **c. Chapter 3. Special Situations**. Chapter 3 details specific mission types as they are carried out at AFATDS specific to LMM, ATACMS Block I and Block II.
   - **d. Chapter 4**. **Reports/Requests, Planning and Commander's Guidance**. Chapter 4 contains detailed descriptions of the AFATDS Requests and Reports process used to Retrieve or Transmit database information between AFATDS and the MLRS launcher, followed by specific Deployment and Guidance tasks.
   - **e. Appendix A. Operations of the FDC.** Database guide to establish Minimum Firing Capability.

2. **Conventions used in this publication.** This publication is procedure oriented. Where appropriate, fundamental information is provided at the beginning of the chapter that supports the tasks that follow. This information is in paragraph form. Specific tasks that follow are, for the most part standalone and complete.

   1) **Construction tasks** are carried out at AFATDS and result in information added to the database or transmitted to other stations. Below is an example.

DB1: Construct Firing Battery/Platoon Unit Data. This task builds the fire unit in the current situation.		
Step	**Action**	**Result\Explanation**
1.	Click **Units, Workspace, Options, New, New Friendly Unit.**	The **Create New Unit** window displays.
NOTE The **Create New Unit** window lists all units in the **Master Unit List**. This can be extremely long. The list can be reduced to more manageable size by selecting the **Filter** button and sorting by unit name, device type or master unit list number		

   2) **Mission Tasks** involve the interaction of multiple stations. In these tasks, the AFATDS portion is detailed while the actions of other stations are descriptive only. Below is an example:

FM5: Process an Area Fire Mission			
Step	**Station**	**Action**	**Result/Explanation**
1	Observer	Composes and transmits call for fire.	The observer may be a human or sensor device. The call for fire may be transmitted to an FSE/FSCC or FA CP AFATDS. That AFATDS may then transmit a fire order to the battery/platoon AFATDS.
If the mission is received via data communications, go to step 3.			
2.	Btry/Plt AFATDS	**Complete the Initiate Fire Mission window.** Click **Mission Processing, Initiate Fire Mission.** See TASK FM6. Initiate a Fire Mission at AFATDS.	

3) Description Tasks provide information concerning windows and are related to AFATDS output. These tasks are designed to inform the operator of information provided by to the AFATDS. Below is an example.

Examine the Intervention Windows.		
Step	**Action**	**Result/Explanation**
2.	The following data is presented.	
	DATA	**FUNCTION**
a.	**Tgt Number**	Displays NATO target number for this mission.
b.	**Find Target**	Centers the **Current** window map on the target when selected. The target will display even if no overlay exists for active targets.

Fonts. Fonts are used to indicate information as follows:

1) **\ Denotes** successive selections when opening AFATDS windows (AFATDS Current Toolbar\Mission Processing\Mission Routing\Mission Info Routing)**.**
2) **Bold text** indicates an AFATDS field name, menu selection or window name.

Chapter 1.
Prepare the AFATDS to Conduct MLRS Operations.

Section I

General. This chapter provides detailed procedures for establishing communications with Fire Control Systems (FCS) to conduct MLRS operations.

1. **How to use this chapter.** This chapter provides detailed procedures for constructing a database. This procedure begins with building Platoon and SPLL unit data and ends with transmitting data to higher and supported headquarters. The procedures are ordered to allow the operator to move sequentially from the first to the last. Because the completeness of the database depends upon a number of factors (how much data will be received from higher headquarters, etc.), the heading of each table provides direction should any optional procedure be skipped. This chapter provides step-by-step procedure to prepare the AFATDS for MLRS operations.

2. **Additional database information.** MLRS battery and platoon FDCs are constructed as field artillery command posts (FA CPs). SPLLs of the battery are constructed as Rocket units and commanded by the battery FDC. When fire missions are processed, the battery FDC transmits information copies of the fire mission to the platoon FDC. To allow the platoon FDC to process fire missions for its SPLLs, the following steps are carried out:

   a. The information copy routing for the fire mission is deleted at the battery FDC.
   b. The General unit information folder, the command relationship for each SPLL is changed to indicate the platoon FDC as the Command Unit ID.c. The platoon FDC transmits these changes to higher and supported units.

Section II.

DB1 Construct Battery/Platoon FDC Unit Data.

Conditions: Given an AFATDS workstation that is powered, with AFATDS started, activated as a Battery FDC and with the current situation displayed construct Battery/Platoon FDC unit data.

DB1: Construct Battery/Platoon FDC Unit Data. This Procedure begins with current situation displayed.		
Step	**Action**	**Result/Explanation**
1.	Click **Units\Workspace\Options\New\New Friendly Unit.**	The **Create New Unit** window displays.
NOTE The Create New Unit window lists all units in the Master Unit List that are not stored in the current situation as units. This list can be extremely long. The list can be reduced to more manageable size by selecting the **Filter** button and sorting by unit name, device type or master unit list number.		
2.	Click the name of the Platoon FDC in the **Unit ID** list.	The name highlights.
3.	Click **Unit Type** button and select Other.	The MLRS platoon is constructed as a command post (FACP); Do not select Rocket!
4.	Click **OK**.	The Unit Workspace/Basic Data/Unit window displays.

DB1: Construct Battery/Platoon FDC Unit Data. This Procedure begins with current situation displayed.		
Step	**Action**	**Result/Explanation**
5.	Complete the Identification section.	
a.	Click **Service** and select the branch of service.	Information is used in some AFATDS message interfaces and planning processes.
b.	Click **Role** and select Command Post.	
c.	Click **Echelon** and select Battery or Platoon.	Used to construct map symbol and to determine unit size in mission processing.
d.	Click **Function** and select the Field Artillery MLRS.	Selection determines form of unit symbol for AFATDS map.
e.	Click in the **Lower Echelon ID:** field and type the unit ID.	This becomes the label on the upper right of the unit's map symbol and is case sensitive.
f.	Click in the **Higher Echelon ID:** and enter the higher HQ ID.	This becomes the label on the lower right of the unit's map symbol and is case sensitive.
6.	Complete the Current Location section.	
a.	Click in the **Current Location** field and type the starting location.	Type the complete coordinates in the form H EEEEE LLL NNNNN AAAA GGG where H is the higher order easting, EEEEE is the short easting coordinate, LLL is the higher order northing, NNNNN is the short northing coordinate, AAAA is the altitude in meters and GGG is the grid zone.
		OR
b.	To enter a **LAT/LONG**:	Point in the location field(s). Simultaneously press <SHIFT> and right click to change the input form of the location fields.
c.		Type the latitude and longitude to the nearest 0.1 seconds.
		OR
d.	To enter **MGRS**:	Point in the location field(s). Simultaneously press <SHIFT> and right click to change the input form of the location fields to Lat/Long. Repeat this process to change the form to MGRS.
e.		Type the location in the form GGXSSEEEEENNNNN where GG is the grid zone number, X is the grid zone letter, SS is the 100,000 meter square, EEEEE is the five digit easting and NNNNN is the five digit northing.
f.	Click on **Datum:** and enter the datum of the used in position area survey.	
g.	Click on the **General Data** file in General folder of the Menu tree left of the window.	Unit Workspace/General Data/Unit window displays.
7.	Complete the Command Support section. This data must be edited after the command unit has been stored in the AFATDS database.	
8.	Complete the Status section.	
a.	Click on **Operational Status** and select.	Ready is reported if the unit is capable of receiving and executing fire missions. Otherwise, select the appropriate Status for the Unit.
b.	Click on the **Detailed Data** file in Detail folder of the Menu tree left of the window.	Unit Workspace/Detailed Data/Unit window displays.
9.	Complete Detailed Data section for other type units.	
a.	There is no data on the Detailed Unit information for type Other unit that is required for entry at firing platoon level.	
b.	Go to step 10.	

DB1: Construct Battery/Platoon FDC Unit Data. This Procedure begins with current situation displayed.		
Step	**Action**	**Result/Explanation**
10.	From the Options pull down menu Click **Save** to save the data, or Click **Exit** to cancel the entry data**.**	Unit Workspace/Detailed Data/Unit window closes, Unit Workspace/Basic Data/Unit window displays, and the unit data is stored.
11.	From the Options pull down menu Click **Exit.**	Unit Workspace/Basic Data/Unit window closes.

DB2 Add a SPLL to the Master Unit List.

Conditions: Given an AFATDS workstation that is powered, with AFATDS started, activated and with the current situation displayed and the Platoon FDC unit data stored add a SPLL to the master unit list.

Additional Information: This procedure adds the identity of a SPLL to the AFATDS Master Unit List. This procedure applies only if the SPLL is not already in the master unit list.

DB2: Add a SPLL to the Master Unit List. If the SPLL is already stored in the Master Unit List, go to procedure DB3.		
Step	**Action**	**Result/Explanation**
1.	Click **System, Administration, Master Unit List.**	The Master Unit List window displays.
2.	Click the **New** button.	The Edit Unit window displays.
3.	Click the **Unit ID** field and type the name of the SPLL.	The SPLL number is entered in the first field and the platoon number in the second. The remaining fields are entered matching the MUL entries of the parent FDC.
4.	Click the **System Type** field and select Army FCS.	
5.	Click the **Tacfire Alias** field and type the alias of the SPLL.	The alias should be entered with the form: S/P/B/BN/BDE where S is the SPLL number, P is the platoon number, B is the battery letter, BN is the battalion number and BDE is the brigade.
6.	Click the **Unit Number** field and type the AFATDS unit number.	The unit number should be coordinated with higher headquarters to avoid conflicts.
7.	Click **OK**.	The SPLL unit data is stored and the Edit Unit window closes.

DB3 Construct SPLL Unit Data

Conditions: Given an AFATDS workstation that is powered, with AFATDS started, activated and with the current situation displayed and the Platoon FDC unit data stored, construct SPLL unit data.

Additional Information: Each SPLL is constructed as a separate fire unit.

DB3: Construct SPLL Unit Data. This Procedure builds the MLRS launchers in the current situation.		
Step	**Action**	**Result/Explanation**
1.	Click **Units\Workspace\Options\New\New Friendly Unit**	The **Create New Unit** window displays.

DB3: Construct SPLL Unit Data. This Procedure builds the MLRS launchers in the current situation.		
Step	**Action**	**Result/Explanation**
NOTE The Create New Unit window lists all units in the Master Unit List. This can be extremely long. The list can be reduced to more manageable size by selecting the Filter button and sorting by unit name, device type or master units list number.		
2.	Click the name of the weapon in the **Unit ID** list.	The name highlights.
3.	Click **Unit Type** button and select Rocket.	Rocket appears in the Unit Type field.
4.	Click **OK.**	The Unit Workspace/Basic Data/Unit window displays.
5.	Complete the Identification section.	
a.	Click **Service** and select the branch of service.	Information is used in some AFATDS message interfaces and planning processes.
b.	Click **Role** and select Unit.	Used to construct map symbol.
c.	Click **Echelon** and select Section.	Used to construct map symbol and to determine unit size in mission processing.
d.	Click **Function** and select Field Artillery MLRS.	Used to construct map symbol.
e.	Click in the **Lower Echelon ID:** field and type the unit ID.	This becomes the label on the upper right of the unit's map symbol and is case sensitive.
f.	Click in the **Higher Echelon ID:** and enter the higher HQ ID.	This becomes the label on the lower right of the unit's map symbol and is case sensitive.
6.	Complete the Current Location section.	
a.	Click in the **Current Location** field and type the starting location.	Type the complete coordinates in the form H EEEEE LLL NNNNN AAAA GGG where H is the higher order easting, EEEEE is the short easting coordinate, LLL is the higher order northing, NNNNN is the short northing coordinate, AAAA is the altitude in meters and GGG is the grid zone. **NOTE:** The location will update when the weapon reports it location via digital communications
b.	Click on **Datum:** and enter the datum of the used in the position area survey.	
c.	Click on the **General Data** file in General folder of the Menu tree left of the window.	Unit Workspace/General Data/Unit window displays.
7.	Complete the Command Support section.	
a.	Click the **Current Command Unit ID** and select the unit ID of the Battery FDC[1].	The selection list displays only units already constructed.
b.	Click the **Current Supported Unit ID** and select the unit ID of the Battery FDC[2].	The selection list displays only units already constructed.
8.	Complete the Status section.	
a.	Click on **Mission** and select the battalion's tactical mission.	This information is not used locally but is used at DIVARTY/ARTY REGT level mission processing.

[1] The unit ID of the platoon FDC is entered in the Current Command Unit ID if the Platoon FDC is exercising control of the SPLL independent of the battery.
[2] The unit ID of the platoon FDC is entered in the Current Command Unit ID if the Platoon FDC is exercising control of the SPLL independent of the battery.

DB3: Construct SPLL Unit Data. This Procedure builds the MLRS launchers in the current situation.		
Step	**Action**	**Result/Explanation**
b.	Click on **Operational Status** and select.	Ready is reported if the unit is capable of receiving and executing fire missions. These selection update based on status received from the weapons via digital communications.
c.	Click on the **Detailed Data** file in Detail folder of the Menu tree left of the window.	Unit Workspace/Detailed Data/Unit window displays.
9.	Complete the Detailed data.	
a.	Click on **Weapon Model** and select M270 or M270A1.	Weapon system capability data in the window changes based on selection.
b.	Edit the following as required:	
1)	**Response Time (min)**	The time required to fire a mission measured from call for fire reception.
2)	**Max Range (m)**	The maximum achievable range for any munitions..
3)	**Min Range (m)**	Least range at which targets may be engaged.
4)	**Max Rate of Fire (RPM)**	Not used in processing[3].
5)	**Azimuth of Lay (mils)**	The azimuth of lay is the heading azimuth. AFATDS uses this azimuth to determine the left and right limits of the SPLLs range fan.
6)	**Left Azimuth Limit (mils)**	Displays the azimuth of the left traverse limit. To change, enter the traverse in mil from the azimuth of lay to the left limit. For example, with an Azimuth of Lay of 1200, entering 0400 for the Left Azimuth Limit will convert to a value 400 mils left of 1200 (or 0800) when the cursor is moved to another field.
7)	**Right Azimuth Limit (mils)**	Displays the azimuth of the right traverse limit. To change, enter the traverse in mil from the azimuth of lay to the right limit. For example, with an Azimuth of Lay of 1200, entering 0400 for the Right Azimuth Limit will convert to a value 400 mils right of 1200 (or 1600) when the cursor is moved to another field.
NOTE The minimum and maximum ranges are reported to higher FDCs and FSEs or FSCCs. These values are used to plot the fire unit's range fan and to determine range capabilities.		
10.	Complete Weapon Data section.	
a.	Click in the **Authorized** field and type **1.**	This is a required entry but is not used in processing.
b.	Click in the **Operational** field and type **1**.	This value is used in processing fire missions. A unit must have at least one operational weapon to be considered for fire mission assignment.
c.	Click the **Save** button.	The unit is created on the map and in the database. In addition, the folder tree on the left of the window populates to allow additional unit information to be stored.
11.	Enter Weapon data**.**	
a.	Click on the **Weapon** file in Detail folder of the Menu tree left of the window.	The Unit Workspace/Weapon/Unit window displays with no weapon data.
b.	Click the **New** button.	The Rocket Weapon window displays.

[3] Maximum and sustained rates of fire are based on weapon system defaults. Changes made in the detailed unit information do not affect processing.

DB3: Construct SPLL Unit Data. This Procedure builds the MLRS launchers in the current situation.		
Step	**Action**	**Result/Explanation**
NOTE The displayed data is for SPLL 1. Data displayed is defaulted based on the weapon system. Rates of fire are not used in mission or fire plan processing. Location displays the location entered in the unit's basic unit information. This updates when the SPLL reports location. The following fields should be verified and edited as required:		
1)	**Status**	Defaults to Ready.
2)	**Response Posture**	Selections are Hot, Cool and Cold. Status of Cool or Cold equated to unavailable for fire missions.
3)	**Pod Number**, **J-Code**, **Mun Model** and **Qty**	The operator cannot enter these ammunition fields. These update when the SPLL reports status. If ammunition must be entered during database construction, see procedure DB7 below.
4)	Click **OK.**	The Rocket Weapon window closes.
12.	From the Options pull down menu Click **Save** to save the data, or Click **Exit** to cancel the entry data**.**	Unit Workspace/Basic Data/Unit window closes.

DB4 Store Uploaded Ammunition

Conditions: Given a AFATDS workstation that is powered, with the AFATDS Current situation displayed and at least one SPLL unit constructed, enter and store the uploaded ammunition.

Additional Information: AFATDS normally receives uploaded ammunition from the SPLL and automatically stores this data. The reported ammunition can be reviewed, but not edited, by displaying the Weapon folder in the SPLL unit data. If a database is constructed for training and communications with the SPLL are not established, this procedure allows ammunition to be stored.

DB4: Store Uploaded Ammunition. This Procedure begins with SPLL unit constructed as described in Procedure DB 3. If uploaded ammunition will be reported by the SPLL via data communications, go to Procedure DB5.		
Step	**Action**	**Result/Explanation**
1.	Click **Units/Workspace** or Click on the **FCS Weapon Status** icon.	The Unit Workspace/Current window displays with all stored units listed. If the FCS Weapon Status icon is used, only the SPLLs Command/Supported by the editing unit are listed
2.	Click on the **SPLL unit ID** for which ammunition will be stored.	The SPLL unit ID highlights.
3.	Double Click on the **SPLL unit ID** or select options **Edit**.	Unit Workspace/Basic Data/Unit window for the SPLL displays.
4.	Click the **Uploaded Rockets** file in Ammunition folder of the Menu tree left of the window.	The Unit Workspace/Basic Data/Unit window displays the Uploaded Rocket Summary.
5.	Double click the in the **Model** column for the desired Category of munition**.**	The MLRS Munitions window displays.
6.	Click the **On-Hand 0-2 Min** field and type the number of rockets available.	The selection and quantity of this field is determined by the location that SPLL occupies; Firing Point, Hide Point, or Re-Arm Point.

DB4: Store Uploaded Ammunition. This Procedure begins with SPLL unit constructed as described in Procedure DB 3. If uploaded ammunition will be reported by the SPLL via data communications, go to Procedure DB5.		
Step	**Action**	**Result/Explanation**
7.	Click the **On-Hand 2-5 Min** field and type the number of rockets available.	The selection and quantity of this field is determined by the location that SPLL occupies; Firing Point, Hide Point, or Re-Arm Point.
8.	Click the **On-Hand 5-20 Min** field and type the number of rockets available.	The selection and quantity of this field is determined by the location that SPLL occupies; Firing Point, Hide Point, or Re-Arm Point.
9.	Click the **OK** button.	The MLRS Munitions window closes and the Uploaded Rocket Summary displays the uploaded ammunition.
10.	From the Options pull down menu Click **Save** to save the data, or Click **Exit** to cancel the entry data**.**	Unit Workspace/Uploaded Rockets/Unit window closes.
NOTE Additional SPLLs may be constructed by copying the unit data of the first and editing the data. The unit data is copied by selecting Units, Edit, clicking on the SPLL to copy, clicking Options, Copy and selecting the Unit ID to which data will be copied.		

DB5 Construct Points

Conditions: Given an AFATDS workstation that is powered, with the AFATDS Current situation displayed and the battery/platoon FDC unit in the Current Situation, Construct MLRS Launcher Points.

Additional Information: AFATDS manages the location of SPLLs by assigning point locations for firing, reloading, etc. This management process is described in detail in chapter 5. This procedure provides steps for storing point data.
The Steps in the Action column will refer to the icons in the AFATDS Current toolbar when navigating through the windows. Selecting the Named files from the menu when creating or editing data may perform the same procedures.

DB5 Construct Points This Procedure begins with the current situation displayed. If points are not to be entered, go to Procedure DB6.		
Step	**Action**	**Result/Explanation**
1.	Click **Geometry Icon/Options/New**	The **New Geometry** window displays.
2.	Click the **Force/Shape** button and select **Friendly Point**.	The Geometry Type list displays point geometry types.
3.	Click in the **Name** field and type the name of the geometry.	1 to 10 letters or numbers. Spaces may be included.
4.	Click the desired point type in the **Geometry Type** list.	The name highlights. Applicable types are: Firing Point, Hide Point and Reload Point.
5.	Click **OK**	The Point Information window displays.
6.	Edit the following as required:	
a.	**Establishing Unit ID**	Defaults to the unit creating the geometry.
b.	Click the **Add** button. Highlight SPLL Unit.	Displays Unit List with all Current Units. Selection allows a unit to be assigned this point.
NOTE Assignment of a SPLL to the point causes that point to display in the unit's Point folder.		

DB5 Construct Points This Procedure begins with the current situation displayed. If points are not to be entered, go to Procedure DB6.		
Step	**Action**	**Result/Explanation**
c.	**Pt. ID Alias:**	Type the point name that will be used to identify the point to the SPLL. This may be the same as the geometry name. Point aliases are one letter, A-C and one number, 1-9.
d.	**Usage Threshold:**	Type the number of times the point may be occupied or fired from. This value is used by AFATDS in managing point assignments. The default is 99.
e.	**Usage History:**	This is the number of times the point has been occupied or fired from. AFATDS will update this automatically as the point is used. Default is 0.
f.	Establish effective times	
1)	Click the **Absolute** button and type the Effective Time: and Expiration Time:	Absolute timing requires entry of effective and end times for the measure. The measure is displayed as a planned. Time is entered in the form DDHHHHZMMMYY where DD is the day, HHHH is the Z is the time zone, MMM is the month and YY is the year.
	OR	
2)	Click the **On Call** button and type the Effective Time: and Expiration Time:	On call timing leaves the measure in a planned state until the geometry is edited by the AFATDS operator, and the Activate button is selected. At that instant, the number of minutes in the Effective Time is added to the current time to establish the absolute effective time. The number of minutes in the Expiration Time is added to the current time to establish the absolute expiration time.
7.	Enter **coordinates**.	
a.	Click the **Coordinates** button.	The Edit Firing Point or Edit Point window displays.
b.	Click the **Location** field and enter the grid and altitude of the firing point.	This is a required entry. The point symbol displays on the map during edit of this window.
For a firing point, go to step 7.c. below. For all other points, go to step 8. Below.		
c.	Click the **Parking Heading:** field and enter the azimuth.	This is the grid azimuth the SPLL points when occupying the point. This is an optional entry.
d.	Click the **Mask Left AZ (mils):** field and enter the left azimuth of masking terrain.	This is an optional entry. This data is normally transmitted from the SPLL.
e.	Click the **Mask Right AZ (mils):** field and enter the right azimuth of masking terrain.	This is an optional entry. This data is normally transmitted from the SPLL.
f.	Click the **Range to Mask (m):** field and enter the distance to masking terrain.	This is an optional entry. This data is normally transmitted from the SPLL.
g.	Click the **Mask Elevation (mils):** field and enter the height of masking terrain.	This is an optional entry. This data is normally transmitted from the SPLL.
h.	Click the **OK** button to save the coordinate data.	The Point Information window displays.
8.	Click the **OK** button.	The Point Information window closes, Geometry Workspace window displays, and the geometry stores.
9.	Close the Geometry Workspace window.	

DB6 Create Stored Ammunition

Conditions: Given an AFATDS workstation that is powered, with the AFATDS Current situation displayed and the battery/platoon FDC unit constructed, create ammunition storage sites.

Additional Information: AFATDS uses a combination of uploaded and stored ammunition to determine ammunition availability for mission processing. This process is described in detail in chapter 2. This procedure provides steps for creating stored ammunition inventory.

DB6: Create Stored Ammunition This Procedure begins with SPLL unit constructed as described in Procedure DB3. If ammunition storage sites will not be created, go to Procedure DB7.		
Step	**Action**	**Result/Explanation**
1.	Click on the **FCS Weapon Status** icon.	If the FCS Weapon Status icon is used, only the SPLLs Command/Supported by the editing unit are listed
2.	Click on the SPLL **unit ID** for which ammunition will be stored.	The SPLL unit ID highlights.
3.	Double Click on the SPLL unit ID.	Unit Workspace/Basic Data/Unit window for the SPLL displays.
4.	Click the **Stored Rockets** file of the Ammunition folder.	The Unit Workspace/Stored Rockets/Unit window displays the Stored Rocket Sites and Stored Rocket Summary.
5.	Click the **New** button.	The New Storage Site window displays.
6.	Click down pointing arrow field in the **Storage Site** section and select the point identification.	Selections are A1 through A9, B1 through B9 and C1 through C9.
7.	Click the **Location** field and type the grid and altitude of the storage site.	
8.	Click the **OK** button.	The New Storage Site window closes and the Stored Rocket Sites update with the location.
9.	Double click the **Storage Site** in the Stored Rocket Sites. The Stored Rocket Summary updates with the ammunition currently assigned to the storage site.	All possible MLRS ammunition is displayed in a spreadsheet format. All Authorized Quantity and On-Hand quantities are defaulted to 0.
10.	Enter ammunition data:	
a.	Double click the desired rocket or missile in the **Model** column of the Stored Rocket Summary.	The Stored MLRS Munitions window displays.
b.	Double click the **MLRS on-ground:** field and type the number of rockets or missiles stored on the ground.	
c.	Double click the **On-ground Response (min):** field and type the number of minutes required to upload ground stored ammunition to a launcher.	
d.	Double click the **MLRS on-wheels:** field and type the number of rockets or missiles stored vehicles.	

DB6: Create Stored Ammunition This Procedure begins with SPLL unit constructed as described in Procedure DB3. If ammunition storage sites will not be created, go to Procedure DB7.		
Step	**Action**	**Result/Explanation**
e.	Double click the **On-wheels Response (min):** field and type the number of minutes required to upload vehicle-stored ammunition to a launcher.	
11.	Click the **OK** button.	The Stored MLRS Munitions window closes and the On-Hand column for the selected ammunition displays the stored ammunition count.
12.	Click the **Authorized Quantity** field for the selected ammunition.	A cursor appears in the field allowing the value to be edited. This is an optional entry that is compared to ammunition thresholds to provide and summary of unit capability. Thresholds can also be used to trigger data distribution.
a.	Type the number of munitions the unit is authorized	The quantity entered is applied to all rockets of the same category.
13.	Repeat steps 10 through 12 as required to enter all stored ammunition.	
14.	From the Options pull down menu Click **Save** to save the data**.**	Unit Workspace/Stored Rockets/Unit window for the SPLL displays
15.	From the Options pull down menu Click **Save** to save the data, or Click **Exit** to cancel the entry data**.**	The Select Unit window closes.

DB7 Store Survey Control Points

Conditions: Given an AFATDS workstation that is powered, with AFATDS started, activated and with the current situation displayed establish and Store Survey Control Points.

Additional Information: AFATDS stores survey control points differently than it does other points geometry's. Survey control points may be requested by the FCS and stored at the SPLL.

DB7: Store Survey Control Points This Procedure begins with the current situation displayed**.** If Survey Control Points will not be entered, go to Procedure DB8.		
Step	**Action**	**Result/Explanation**
1.	On the **AFATDS Current toolbar**, click **Geometries, Survey Control Points…**	The SCPs window displays.
2.	Click the **New** button.	The SCP Information window displays with a list of any previously displayed SCPs.
3.	Enter SCP data,	
a.	Click the **Name** field and type the SCP name.	Name can be 1 to 8 alphanumeric characters. Spaces are allowed, no special characters are allowed. This is a required entry.

DB7: Store Survey Control Points This Procedure begins with the current situation displayed. If Survey Control Points will not be entered, go to Procedure DB8.		
Step	**Action**	**Result/Explanation**
NOTE Survey control points (SCPs), unlike other points associated with MLRS units, do not possess a point alias in AFATDS. To allow SCPs to be transferred to a SPLL, the SCP name must begin with a letter A, B or C. A number 1 through 9 must follow the letter. Additional characters may be added to the name. However, when the SCP is transmitted to the SPLL, the SCP name is abbreviated to only the first two characters.		
b.	Click the **Location** field and type the UTM coordinates of the SCP.	This is a conditional entry. Leave blank if geographic coordinates are entered in step 3.b.2. If UTM coordinates are entered, go to step 3.c.
	OR	
1)	Click the button to the left of **Latitude**.	The Latitude and Longitude fields become active.
2)	Type the geographic coordinates in the **Latitude** and **Longitude** fields.	This is a conditional entry. Leave blank if UTM coordinates are entered in step 3.b.1.
c.	Click the **Source** field and select the agency that provided the survey data.	This is an optional entry that defaults to Unknown.
d.	Click the **Order** field and select the accuracy of the survey.	Order can be selected as 1 – 6. This is an optional entry that defaults to 1.
e.	Click the **Mark 1:** field and type a name for the first azimuth mark.	Name can be 1 to 8 characters including special characters and spaces. This is an optional entry.
f.	Click the upper **Azimuth (mils):** field and type the grid azimuth of the azimuth Mark 1.	The azimuth is 4 digits left of the decimal and may include up to 3 digits right of the decimal.
g.	Click the upper **Description** field and type the description of the azimuth Mark 1**.**	The description can contain 1 to 30 characters including special characters and blank spaces. This assists in locating the azimuth mark. Description is an optional entry.
h.	Click the **Mark 2:** field and type a name for the second azimuth mark.	Name can be 1 to 8 characters including special characters and spaces. This is an optional entry.
i.	Click the lower **Azimuth (mils):** field and type the grid azimuth of the azimuth Mark 2.	The azimuth is 4 digits left of the decimal and may include up to 3 digits right of the decimal.
j.	Click the middle **Description** field and type the description of the azimuth Mark 2**.**	The description can contain 1 to 30 characters including special characters and blank spaces. This assists in locating the azimuth mark. Description is an optional entry.
k.	Click the lower **Description** field and type the description of the SCP.	The description can contain 1 to 200 characters including special characters and blank spaces. This assists in locating the SCP. Description is an optional entry.
l.	Click the **Route** field and type directions to the SCP.	The description can contain 1 to 200 characters including special characters and blank spaces. This assists in locating the SCP. Route is an optional entry.
4.	Click the **OK** button.	The SCP Information window closes. The SCPs window displays with the new SCP added.
5.	Click the **OK** button.	The SCPs window closes.

DB8 Establish Target Decay Time

Conditions: Given an AFATDS workstation that is powered, with AFATDS started, activated and with the current situation displayed, establish Target Decay Time.

Additional Information: Target Decay Time is the number of minutes a target type remains valid for attack after it is reported. To the DTG of the target report or CFF is added the Target Decay Time. This sum establishes the not-later-then DTG. If the target is engaged after the NLT DTG, AFATDS will recommend the target be denied. Normally, target decay time guidance is received from higher or supported headquarters and is based on analysis of enemy capabilities and tactics. However, in lieu of this, some value greater than "0" must be entered during database construction to ensure fire missions will be fired.

NOTE: This is the minimum guidance necessary required by AFATDS software to process fire missions. Proper tactical employment requires additional guidance.

DB8: Establish Target Decay Time. This Procedure begins with the current situation displayed**.** If Target Decay Time guidance will be received from higher or support headquarters, go to Procedure DB9.		
Step	**Action**	**Result/Explanation**
1.	Click on the **Guidance** icon on the AFATDS Current menu, double Click **Target Decay Time**.	The Target Decay Time window displays.
2.	Click the **Target Category** button and select one of the 13 displayed target categories.	The Target Type list displays target types of the selected category.
3.	For each target type, double click the **Decay Time** fields and type the desired number of hours and minutes the target remains valid for attack after discovery.	Separate fields are provided for hours and minutes. Time ranges from 0 hours and 0 minutes to 99 hours and 59 minutes.
4.	Repeat steps 2 and 3 for the remaining target categories and types.	
5.	Click **OK**	The Target Decay Time window closes, the Guidance Workspace window is displayed, and target decay times are stored.
6	From the Options menu select to **Exit** the Guidance Workspace window.	Guidance Workspace window closes.

DB9 Establish FS System Buffer Distance

Conditions: Given an AFATDS workstation that is powered, with AFATDS started, activated and with the current situation displayed establish FS System Buffer Distance.

Additional Information: By definition, an FSCM is violated if the target plots short a linear measure or inside an are measure or the effects of the fires cross the line or into the area. To account for the effects of fires, AFATDS "buffers" FSCMs with a buffer distance. Targets within the buffer distance of an FSCM are assumed to violate that measure. Normally, this guidance is received from higher or supported headquarters. In lieu of this, buffer distance should be entered as part of database construction to allow AFATDS to safely conduct fire support coordination.

DB9: Establish FS System Buffer Distance. This Procedure begins with the current situation displayed**.** If FS System Buffer Guidance will be received from higher or support headquarters, go to Procedure DB10.		
Step	**Action**	**Result/Explanation**
1.	Click on the **Guidance** icon on the AFATDS Current menu, double Click **FS System Buffer Guidance.**	The FS System Buffer Guidance window displays.

DB9: Establish FS System Buffer Distance. This Procedure begins with the current situation displayed. If FS System Buffer Guidance will be received from higher or support headquarters, go to Procedure DB10.		
Step	**Action**	**Result/Explanation**
2.	Click the **Rocket/Missile (m):** field and type the desired FS System Buffer Distance.	The distance is displayed.
3.	Click **OK**	The FS System Buffer Guidance window closes and the buffer distances are stored.
4	From the Options menu select to **Exit** the Guidance Workspace window.	Guidance Workspace window closes.

DB10 Store Rocket/Missile Guidance

Conditions: Given an AFATDS workstation that is powered, with AFATDS started, activated and with the current situation displayed, establish and store Rocket/Missile Guidance.

DB10: Store Rocket Missile Guidance. This Procedure begins with the current situation displayed.		
Step	**Action**	**Result/Explanation**
1.	Click on the **Guidance** icon on the AFATDS Current menu, from the Rocket/Missile folder double Click **Guidance**.	The **Rocket Missile Guidance** window displays.
2.	Edit the default values as required:	
a.	**Self Destruct Code (1-6)**;	Used for AT-II mine. This is equivalent to the FM;FDSMOD AT2: field. Default is 1.
b.	**Time Between Rounds (Sec):**	The time delay between firing rockets from the same launcher. Legal entries are 5-99. Default is 5.
c.	**Dwell time (Min):**	The amount of time a launcher may occupy a firing point. Legal entries are 0-99. Default is 0.
d.	**High QE Authorized** check box	Allows high quadrant elevation to be assigned in the MLRS;CFF. This is equivalent to the HQE entry in the FM;FDSMOD message of the FDS. Default is High QE not authorized.
e.	**Allow Multiple Missions** check box	Allows multiple missions to be assigned to a launcher on a firing point. This is the equivalent of the FDS FM;FDSMOD MULMSN field. Default is multiple missions not authorized.
f.	**Reload When**	Selects to reload the launcher when One Pod Empty or Both Pods Empty. This guidance is used in deciding when to send the launcher to a re-arm point. This is equivalent to the FM;FDSMOD RELLVL field.
g.	**MFR Format**	Selection of Short MFR format will cause AFATDS to not update MLRS munitions on hand when the MFR is received. The Long format should be used.
h.	**Terminal Homing Munitions, Altitude of Flight:**	The maximum altitude of terminal homing munitions in feet. This is the FM;FDSMOD equivalent of the THMALT: field. Default is 0.
i.	**Terminal Homing Munitions, Target Count Code:**	Specifies the greatest distance between target elements allowable without firing a multiple mission; equivalent to the FM;FDSMOD THMTES: field. Default is A.

DB10: Store Rocket Missile Guidance. This Procedure begins with the current situation displayed.		
Step	**Action**	**Result/Explanation**
j.	**Terminal Homing Munitions, Scan Limit (mils):**	Provides the search area, in mils of scan, each submunition uses to scan for targets. This is the FM;FDSMOD equivalent of THMSCN field. Default is 0.
k.	**Terminal Homing Munitions, Target Element Separation (m):**	Specifies the greatest distance between target elements allowable without firing a multiple mission; equivalent to the FM;FDSMOD THMTES: field. Default is 0.
3.	Click the **OK** button.	The Rocket Missile Guidance window closes.
4	From the Options menu select to **Exit** the Guidance Workspace window.	Guidance Workspace window closes.

DB11 Make Initial Report of Fire Unit Status to Higher and Supported Headquarters

Conditions: Given an AFATDS workstation that is powered, with AFATDS started, activated and with the current situation displayed transmit an initial report of fire unit status to higher an supported headquarters.

Additional Information: Maintenance of unit data is the responsibility of the actual unit. After completion of the database and establishment of communications, the AFATDS operator reports the battery/platoon status and ammunition inventory.

DB11: Make Initial Report of Fire Unit Status to Higher and Supported Headquarters. This Procedure begins with the current situation displayed and after communications has been established.		
Step	**Action**	**Result/Explanation**
1.	**Correct Command and Supported relationships.**	This step was omitted during the construction of the FDC unit because the commanding and supported units did not exist in the database at that time.
a.	Click on the FDC's symbol on the **Current** map.	The fire unit symbol changes to white outline form.
b.	With the cursor over the selected unit, click and hold the right mouse button.	A pop-up menu displays.
c.	Release on **Edit.**	The Unit ID window displays.
d.	Click the **General Data** folder.	The Unit ID window displays general data.
e.	Click **Current Command Unit ID** and select the unit that commands the fire unit.	This is normally the battalion FDC.
f.	Click **Current Supported Unit ID** and select the unit that fire unit supports.	This is normally the battalion FDC.
g.	From the Options pull down menu Click **Save** to save the data, or Click **Exit** to cancel the entry data.	The Unit ID window closes.
2.	Transmit unit data.	
a.	With the cursor over the selected unit, click and hold the right mouse button.	A pop-up menu displays.
b.	Release on **Send Status.**	The Send Status window displays.
c.	In the **Send** list, click all check boxes for all data types.	Checks appear in the checkboxes and the Send button activates.
d.	Click the **Send** button.	The Send Status window closes and the unit data is transmitted to all units in the distribution setup.
A low level alert indicating "Transmission Complete" is posted to the Low Level Alerts List.		

DB12 Create and implement an FCS Communications Configuration

Conditions: Given an AFATDS workstation that is powered, with AFATDS started and activated Create and implement an FCS Communications Configuration for Battery FDC and POC OPFACs.

Additional FCS net information: The battery FDC normally communicates directly with the SPLLs. In the event that masking terrain or distance makes direct communications impossible, this procedure also creates secondary, indirect communications routes from the battery FDC, relayed by the platoon operations center, to communicate with the SPLLs.

DB12: Create a FCS net. This task creates network parameters to operate a FCS network communicating from the TCIM on radio. This task is required at battery and platoon levels to communicate with the FCS.		
Step	**Action**	**Result/Explanation**
1.	Create the FCS Network:	
a.	Click **System/Configuration/ Communications/Planned/Options/ New**	The Select Comm Configuration window displays.
b.	Highlight the Comm Configuration to add Network to and Click **Options, Edit**	The Planned Networks window displays.
c.	Click **Network, New**	The Net Channel Settings window displays.
d.	Enter the following:	
1)	**Network Name**	1 to 16 characters network name with no spaces.
2)	**Protocol**	Select FCS. The More button and all fields except Media Device and Preamble become inactive.
3)	**Address**	Enter the address of the FDC or POC. This is a two-digit value from 01 to 99.
4)	**Media Device**	Choose the communications medium from the displayed list. For FCS communications it is recommended only radio should be used.
5)	**Data Encoding**	Select the method used by all stations on the network: NRZ: preferred method for digital radios and encrypted radio networks.
6)	**Data Rate**	Select the data rate employed by all stations on the net.
7)	**Preamble**	Preambles provide keying and setup time to an attached radio. For wire line communications allows this to default. If preamble must be great enough to allow the radio to power up before sending data. Preamble must be set to the same value at AFATDS as is set at all SPLLs.
e.	Click the **More** button.	The FCS Comm window displays.
f.	Enter the following:	
1)	**Block Mode**	Messages are transmitted in parts or blocks. Double block sends each block twice and is used to overcome intermittent jamming or interference. This has the negative effect of halving the actual data rate. This setting must match at the SPLL.
2)	**FCS**	This entry defines the AFATDS echelon. The selections are: FDC, Battery FDC PL1 through PL4, 1st through 4th platoon operations centers.
3)	Click the **OK** button.	The FCS Comm window closes and the Net Channel Settings window displays.

DB12: Create a FCS net. This task creates network parameters to operate a FCS network communicating from the TCIM on radio. This task is required at battery and platoon levels to communicate with the FCS.		
Step	**Action**	**Result/Explanation**
4)	Click the **OK** button.	The Net Channel Settings window closes.
2.	Add destination units for the network:	In the Comm Configuration window, highlight Planned Configuration and Edit.
a.	On the Planned Networks window, click the **Options, Destination Units.**	The Communications Unit Configuration window displays.
b.	Click **Options, Add Unit**	The Select List window displays. Access to the contents of the Master Unit List and operator created distribution lists is provided.
c.	Select the list on which the desired destination units are found and click **OK.**	The Select Unit window displays.
d.	Click on each SPLLs unit ID, the FDC and/or POCs.	The units' names highlight, multiple selections are allowed.
e.	Click **OK.**	The SPLLs, FDC and POC are added to the Communications Unit Configuration Destination Unit ID column with a red gumball in the Active Route Column.
3.	**Establish routes**. Perform this step for each SPLL and AFATDS on the network:	
a.	Click on the Destination Unit ID.	The name is enclosed in a blue box.
b.	Click **Options, Edit Routes**	The Edit Routes window displays.
c.	Enter the following:	
1)	Click the **Primary** and the **Direct** button.	
2)	**Via**	Select the FCS network name.
3)	**Address**	At both battery and POC, enter the address of the destination unit. Addresses are two digit values from 01 to 99.
4)	**Device Number**	Select the type of destination. Selections are: FDC, the battery FDC PL_1 through PL_5, 1st through 5th POC SPLL_1 through SPLL_18.
For POCs, go to step 7) **For FDCs, go to step 5)**		
NOTE To allow the POCs to relay communications between the battery FDC and the SPLLs, secondary, indirect routes are created for the SPLLs at the battery FDC. Steps 3.c.5) through 3.c.6) describe the addition of these routes. These steps apply to the battery FDC only in establishing Secondary Indirect routes for SPLLs.		
5)	**Direct/Indirect**	At the battery FDC select Secondary and Indirect.
6)	**Via**	Select the POC to which the SPLL belongs.
7)	Click **OK.**	The Edit Routes window closes and the Communications Unit Configuration window displays.

DB13 Assign a Network to a Communications Channel

Conditions: Given an AFATDS workstation that is powered, with AFATDS started, activated and a communications configuration, assign a network to a communications channel.

DB13: Assign a Network to a Communications Channel. This task assigns networks to the appropriate TCIM.		
Step	**Action**	**Result/Explanation**
1.	On the Current Networks window, click **Network, Assign Channels**	The Net Channel Assignment window displays.
2.	Click the **name** of a network in the Unassigned Networks list.	The network name highlights.
3.	Click the **TCIM** channel to which the network is to be in the Workstation Channel list.	The channel highlights and the up and down pointing arrows appear.
4.	Click the down pointing arrow.	The selected network is assigned to the selected channel.
5.	Click **OK.**	The Net Channel Assignment window closes
6.	On the Current Networks window, click the desired **Network name**.	The Network name highlights.
7.	Click **Control. On**	The Network Status column displays Enabled.
8.	On the Current Networks window, click **Options, Save**.	The Saved field changes from No to Yes.

DB14 Send Communications Checks

Conditions: Given an AFATDS workstation that is activated and with a Current communications configuration active, send a communications test message.

Additional information: This procedure tests communications between the AFATDS computer and work subscriber. Carrying out this procedure causes the AFATDS to perform the test based on the network type and device type of the subscriber as described below.

Sending a free-text message and receiving an acknowledgement to indicate success tests other systems on a radio or wire net. The operator of the destination system receives a free-text message that includes “Comm check from AFATDS” in the text of the message.
The Operator may elect to use the Network or Destination icons located on the AFATDS Current toolbar. This capability is available only after the Network/Destinations have been established. This option saves time and cuts down the windows navigation.

DB14 Send Communications Checks		
Step	**Action**	**Result/Explanation**
1	Send the comm check	
a.	Click **System, Configuration, Communications, Current.**	The Current Networks window displays.
b.	Click **Options, Destination Units**.	The Current Comm Configuration Units window displays.
c.	To test a destination unit:	
1)	Click the **unit name**.	A blue box appears around the unit name.
2)	Click the **Send Test Message** button.	The test message is transmitted.
3)	Go to step 2 below.	
d.	To test all destinations on a given net:	
	Click a unit on the net to be tested.	A blue box appears around the unit name.
1)	Click **Test Message, All Direct Via Net**.	Test messages are sent to all destinations on the net associated with the selected unit.
2)	Go to step 2.	
3)		

DB14 Send Communications Checks		
Step	**Action**	**Result/Explanation**
e.	To test all destinations for which communications are relayed through another destination:	
1)	Click the name of the relaying unit.	A blue box appears around the unit name.
2)	Click **Test Message, All Indirect Via Unit.**	Test messages are relayed through the destination to all indirect destinations associated with the unit selected.
3)	Go to step 2.	
2	Determine the result of a test message.	
a.	Click the **Test Message Status** window.	The Test Message Status window displays.
Each unit tested displays a row on the Test Message Status window. The status associated with the unit is initially "Pending." The status will eventually change to "Successful" or "Failed." The window does not refresh automatically. The operator must click the Refresh button to display changes. It is recommended that successful tests be deleted by clicking that row and selecting the Delete button. This action not only refreshes the display but also leaves only those units that require troubleshooting communications.		

DB15 Compose and Transmit, or Save a Free-text message.

Conditions: Given an AFATDS workstation that is activated and with a Current communications configuration active transmit a free-text message.

Additional information: This procedure composes and addresses a free-text message. The message is then either transmitted or saved for future use.

DB15: Compose and Transmit or Save a Free-text Message.		
Step	**Action**	**Result/Explanation**
1.	On the **Main Menu** bar, click **Free-text**.	The Free-text - JMPS window displays.
2.	Address the message.	
a.	Click **Address…**button.	The Select Addresses window displays.
b.	Select a destination address from the Select from List on the left side of the window.	The Select Addresses window displays the highlighted unit.
c.	Click the **To→** button.	The selected unit is added as a destination address.
d.	Repeat steps 2.b and 2.c for each additional unit addressee.	
e.	Click the **OK** button.	The Select Addresses window closes and the destination units are added to the To: field of the Free-text – JMPS window.
3.	Compose the message.	
a.	Click the **white text** area and type the message.	
To SEND the message, go to step 4. To SAVE the message for later use, go to step 5.		
4.	To send the message:	
a.	Click the **Send** button.	The Free-text – JMPS window closes and the message is transmitted.
5.	To save the message:	

DB15: Compose and Transmit or Save a Free-text Message.		
Step	**Action**	**Result/Explanation**
a.	Click the **Save as Draft** button.	The Free-text – JMPS window closes and the message is saved.
6.	To send a saved message:	
a.	Click the Mailbox icon in the upper left of the desktop.	The Messaging Main Menu displays.
b.	Click **draft** in the directory tree on the left side of the window.	Previously saved draft messages are displayed.
c.	Click the desired message.	The message highlights in blue and the User View of the Messaging Main Menu displays the message.
d.	On the menu bar, click **Edit, Message**	The Free-text – JMPS window displays.
e.	Click the **Send** button.	The message is sent. The Messaging Main Menu remains displayed.
f.	Click the Minimize button on the upper right of the **Messaging Main Menu** window frame.	The window reduces to an icon on the lower menu bar.

DB16 React to Invalid Received Message Serialization from a SPLL.

Conditions: Given an AFATDS workstation that is powered, with AFATDS activated and communications established with a SPLL, react to invalid received message serialization from a SPLL.

Additional Information: The SPLLs FCS keeps a count of messages transmitted and received from each station. If this count is not correct, a communications alert is received

DB16: React to Invalid Received Message Serialization from a SPLL			
Step	**Station**	**Action**	**Result/Explanation**
1.	Btry/Plt AFATDS	Transmission fails, communications alert C: indicator darkens.	
a.		Click the **C:** field.	The Communications Alert List displays with an alert Description of Transmission Negatively ACKed.
b.		Click the alert description and click the **View** button.	The Review With Sequence Number window displays.
c.		**NOTE** the Destination Unit ID, Expected Sequence Number, and Send Sequence Number fields.	
2.	Btry/Plt AFATDS	Correct the serialization.	
a.		Click the **Destination Units** icon on the AFATDS Current toolbar.	The Communications Unit Configuration window displays.
b.		Click the unit ID indicated in the communications alert.	The unit ID is surrounded by a blue box.
c.		Click **Options, Edit Route**.	The Edit Routes window displays.
d.		Click **Options, Set Serialization**	The Set Serialization window displays.
e.		Click **Transmit Only**	The Transmit Only selection is surrounded by a red box.

DB16: React to Invalid Received Message Serialization from a SPLL			
Step	**Station**	**Action**	**Result/Explanation**
1)		Click in the **Send** box under **Sequence Numbers** and enter the expected number.	The Send box is updated with new entry.
f.		Click **OK**.	The Set Serialization window closes.
g.		Click **Ok** in the Edit Routes window.	The Edit Routes window closes.
h.		**Request** or send messages to the SPLL.	Serialization should be back in sequence. If serialization is still incorrect, have the launcher send Launcher Status. Receiving data from launcher should reset serialization.

Chapter 2
Fire Mission Processing

General. AFATDS processes calls for fire at a battery or platoon FDC in much the same fashion as is does at higher level.

How to use this chapter. Chapter 2 describes the fire mission processing as it applies to MLRS missions. Section I provides an overview of AFATDS rules and guidelines for mission processing. The processing continues past that performed at an FSE/FSCC or FA CP role computer only in that technical fire direction is performed. This section describes the process by which AFATDS processes a received call for fire or fire order. OPFACs that are computing firing solutions should be in the Detailed Attack analysis mode.
Section II. Describes, in detail, the tasks executed at the Battery/Platoon FDCs to process fire missions.

Section I. Overview of AFATDS rules and guidelines for mission processing.

1. **Fire Requests and Fire Orders.** Fire requests are received from observers and radars. Fire orders are received from supported or higher headquarters AFATDS. Though the AFATDS operator never sees the message format or structure of these messages, the type of message has some effect on mission processing.

NOTE: The Icons located in the AFATDS Current toolbar are used in Navigating through the windows, not the named file menus. The following is an overview of procedures considered by the FDC for mission processing. When fire missions are received at the FDC, checks have been performed for Guidances and FSCMs at the Higher echelons and are not to be performed at the receiving OPFAC.

2. **Fire mission reception**. When a fire mission is received, the following actions are performed by AFATD.
   a. Check for target number.
      1) If the mission is received with a target number assigned that target number is maintained.
      2) If the mission does not have a target number, the next available is assigned from the AFATDS target block. If the AFATDS target block has not been entered, a medium level alert is presented to the operator.
   b. Check for target location.
      1) If the mission is received from an unit with a datum other than WGS-84 (as identified in the unit's Basic Unit Information), the location is translated to WGS-84 datum.
      2) If the mission is received without a target altitude, an altitude is assigned. Altitude is assigned based on best available data:
         a) If the altitude of the observer or requestor is known, that altitude is assigned to the mission.
         b) If the altitude of the observer is not known to AFATDS, the altitude of the COB location is assigned to the target.
      3) Check the mission for missing data.
         a) If the mission is a TOT and time-on-target is not received, a request for this information is placed in the **More Data** icon of the **AFATDS Current toolbar**.

3. **Target Filter Checks.** Target filter is performed by AFATDS to ensure that the target requested should actually be engaged. The degree of filtering differs for fire requests and fire orders. This difference avoids duplication of processing already performed by other units in creating the fire order.
   a. **Target Selection** Standards guidance is checked if the mission is received as a fire request and the Check Calls for Fire against TSS check box is checked in **Guidance/Target Selection Standards**. This check is composed of two parts.
      1) The TLE of the requestor or that received in the fire request is compared to the max TLE of the Target Selection Standards.
      2) The time stamp of the target is compared to the current time. This difference is compared to the maximum report age in the Target Selection Standards.

3) A TLE greater than the maximum or an age greater than the maximum report age results in a recommendation to deny the mission.

b. **Duplication** checks are based on the guidance found at **Guidance/ Target Duplication**. This check is made for all fire missions received at the battery/platoon FDC. The check is comprised of two separate examinations. Missions that fail duplication generates options but with a recommendation of deny.
   1) **ANY TARGETS WITH SEPARATION DISTANCE LESS THAN** is the radius from an existing active target that describes a circle. Inside this circle any new target will be considered a duplicate and the computer will recommend DENY.
   2) **SIMILAR TARGETS WITH SEPARATION DISTANCE LESS THAN** provides the distance within which targets of the same type but differing detailed description will be considered duplicates. For example, ARTY, MED and ARTY, TOWED are similar targets.

c. It should be noted that failure of a single check does not prevent the remaining checks from being executed. Thus it is possible to have a fire mission fail multiple filters. The **Intervention** window provides a synopsis of filters checked and results.

4. **FSCM Checks.** The plot of the target and the trajectory are checked against fire support coordination measures. If a violation of a measure is determined, the missions solution will display a yellow option and when the operator selects to transmit fire commands a coordination request is transmitted to the affected agency and AFATDS waits for the response before allowing fire commands to transmit.
   a. **Effect of FS System Buffer Distance Guidance.** To account for the effects of fires, the FS Buffer System guidance distance is applied around the outside edge of the each target checked. For example, if a circular target 100 meters in radius is received, the **FA Rocket/Missile** buffer distance, found at **Guidances/System Preference and Restrictions/FS System Buffer Distance,** is added to the radius. If this distance is 600, the total effects area of the attack on the target is 700m, the sum of the radius and the buffer distance. The assumption is that fires impacting at the very edge of the radius may have blast and fragmentation effect that extends through the buffer distance. The plot of the target violates any FSCM if the total effects area plots behind or intersect a line or plots inside of or intersects the boundary of an area measure.
5. **Fire for Effect munitions selection.**
   a. **Fire for Effect munitions selection.** AFATDS uses rules to select the shell/fuze combination to try for a solution.
      1) **ATACMS Munitions selection rules**. If the fire request/order to fire specifies ATACMS, no other munitions will be substituted if ATACMS does not provide a capable option. Note that ATACMS-APAM may be selected if another DPICM is requested but does not provide a capable option.
      2) **Non-ATACMS Munitions selection rules**.
         a) The preferred munitions are those specified in the fire request.
         b) If there are no munitions specified in the fire request, the **Guidances/FS Attack/FS System Tasks** list is checked for an operator-entered rule that dictates munitions.
         c) The next order of selection is the shell/fuze specified in the **Guidances/Rocket-Missile/Attack Methods**.
         d) If steps 1) through 3) do not provide munitions, AFATDS will use the most effect munitions based on JMEM calculation (Super Qwiki II secret JMEM data has not been loaded).
         e) The last resort for munitions selection is programmed mission characteristic tables.
6. **Volume of fire determination.** The volume of fire is determined based on the following ordered rules:
   a. **For effects type targets**.
      1) If a volume of fire is specified in the fire request or order to fire, this is tried first.
      2) If the volume of fire was specified in the **Guidances/Rocket-Missile/Attack Methods**, this volume of fire is tried next.
      3) Lastly, an effect processing is tried. For rockets, Super Qwikie II or JMEMs are used to compute effects of the munitions. Missiles are computed based on data provided by the loadable munition module (LMM) for that weapon.
   b. **For volleys type targets**.

1) If the fire request specifies a munitions and volume of fire, this volume of fire is used.
2) If the fire request is received with specified munitions but no quantity, the volume of fire is set to 1 volley.
3) If the fire request does not specify munitions or volume of fire, the **Guidances/Rocket-Missile/Attack Methods** volume of fire, if stored, is tried next.

7. **Weapon Selection.** AFATDS applies the following steps to select the weapons to fire.
   a. All available weapons with a status of Ready or Not Given are initially considered. The following further limit weapons used during the mission:
      1) If the Fire Units to fire are specified, only these weapons are considered.
      2) The weapon must have sufficient quantity of munitions. Sufficient quantity is available if the number of quantity of on-hand munitions minus those required for any active and postured missions that equals or exceeds the volume of fire required for the mission.
      3) If the mission is a mission postured to a SPLL, quantity on-hand minus any active missions must equal or exceed the required quantity.
      4) Rank weapons remaining based on weapon's mission load and state:
         a) Weapons with no missions assigned.
         b) Weapons with missions at EOM.
         c) Weapons busy in fire mission.
   b. Determine number of weapons required based on method of fire.
      1) The number of weapons selected to fire is based on the volume of fire required and any limitations established in **Guidances/Rocket-Missile/Attack Methods**. For example, if 12 rockets are required and three launchers are available, one with 12 uploaded rockets and two with six rockets each, the recommended option will select the single 12 round rocket launcher.
8. **The effect of postures**. A fire unit SPLL may be postured to support a particular target. When the posture is assigned, the ammunition designated in the posture message is considered unavailable for other fire missions. If a mission is received on the target assigned in the posture, the postured unit is considered first for attack of the target.
9. **Point Management**. AFATDS manages firing, reload, hide, and rendezvous points. AFATDS assigns points to the SPLL fire units and tracks their usage to prevent SPLLs from being re-assigned points that have been used excessively. The AFATDS mission-processing process does not view point assignment as mandatory to process fire missions. AFATDS will process missions if points are not assigned or available. In these cases, a medium alert is presented to the operator when the mission is processed indicating no point assignment can be made.

   a. **Point aliases.** All points are created as geometries. As with all other AFATDS geometries, the points are given a name of 1 to 10 alphanumeric characters. The point is also assigned a point "alias." This is a two-character name of A1 to A9, B1 to B9 and C1 to C9. The AFATDS geometry name allows point data to be widely distributed to other AFATDS without conflicting names while the locally assigned aliases allows a battalion and below management of its own points. In other words, a higher level AFATDS TOC may receive two sets of points aliased by two MLRS battalions as A1-A9. AFATDS stores the geometries using the unique AFATDS name allowing both sets of "A aliased" geoemtries to be stored.
   b. **Point linkage**. Firing points and hide points that are assigned the same alias are linked for assignment. For example, within an MLRS battalion or lower a firing point is assigned the alias A1. A hide point that supports the firing point is also assigned the alias A1. AFATDS views these as linked and will send the launcher from one to the other when point management requires a move.
   c. **Point Assignment**. Reload, firing, hide and rendezvous points can be assigned to individual fire units, the battery FDC, or platoon operations center. Firing and hide points can be assigned to only a single unit at any one time; other point types may be assigned to multiple units at the same time. This logic prevents the possibility of a SPLL being sent to a firing or hide point that is assigned to another launcher.
   d. **Point management** during mission processing. Points are managed automatically by AFATDS based on the logic discussed below. However, the AFATDS operator can manually override point management during fire missions by specifying the firing point from which the launcher fires and/or the next point to which the launcher moves. This is accomplished by entering this information in the Rocket/Missile Point Information found on the More Mission Data tab of the Initiate Fire Mission window.

1) **Firing points**. Firing point assignment depends to a degree on guidance, specifically, the guidance found at **Guidance/Rocket-Missile/Guidance.**
   a) If Allow Multiple Missions is checked:
      (1) and the fire unit is on a firing point, the new mission is assigned to be fired from the same firing point.
      (2) If the fire unit is not on a firing point, it is assigned to the next available firing point.
   b) If Allow Multiple Missions is not checked, the next available firing point is assigned to the SPLL.
      (1) If the next available firing point usage has reached the threshold, it is assumed that the firing point should not be re-used. A medium level alert is presented to the AFATDS operator. This does not automatically stop the firing of the mission.
      (2) The usage level of the point is tracked by incrementing the value by one to reflect the assigned fire mission.
2) **Next point** after firing. The next point assigned after firing a mission is, determined by guidance as well as the launcher's uploaded ammunition status.
   a) The need to reload ammunition is determined. The launcher ammunition status is determined by comparing the remaining uploaded rockets to **Guidance/Rocket-Missile/Guidance**. If the guidance indicates reload when one pod is empty and the launcher has 6 or less rockets or 1 missile left, reload is required. If the guidance indicates both pods must be empty, all rockets or missile must be expended to require the launcher to reload.
   b) If the launcher must reload, it is directed to the next assigned reload point.
      (1) If the launcher does not have an assigned reload point, it is directed to the first reload point available to its Command Unit ID unit.
      (2) If the commanding unit does not possess a reload point, a medium level alert is presented to the operator indicating that no reload points are available.
   c) If the launcher does not require reload, it is sent to the next available hide point. This is the hide point linked to the next firing point.
3) **Survey Control Points**. Though managed for fire mission processing, AFATDS stores and transmits survey control points to SPLLs. Survey control points (SCPs), unlike other point associated with MLRS units, do not possess a point alias in AFATDS. To allow SCPs to be transferred to a SPLL, the SCP name must begin with a letter A, B or C. The letter must be followed by a number; 1 through 9. Additional characters may be added to the name. However, when the SCP is transmitted to the SPLL, the SCP name is abbreviated to only the first two characters. Failure to follow this naming method causes the FCS at the SPLL to reject the SCP data and return a free-text message to AFATDS indicating the rejected data

10 Postures. Postures are used to assign higher levels of support. The posture can be directed to support an on-call target or an area with an assigned amount of ammunition. The posture is in effect for a designated period of time.

a. **Effect on fire mission processing.** Postures are examined when a fire mission is processed. If the target attacked is postured to a unit, that unit is preferred in unit selection.

b. **Ammunition management.** In addition, ammunition assigned for the posture is considered reserved when the postured unit is considered for attack of any other target. If the engagement of a target (other than that postured) causes the available ammunition (uploaded and stored) to drop below that "reserved" for the posture, an alert is presented to the AFATDS operator. Specifically, postures use the following management rules to determine violations of postured ammunition availability.
   1) AFATDS executes the posture violation check when munitions status information updates are received from subordinate and / or supporting units that have related posture directive information and when the AFATDS operator updates ammunition status.
   2) AFATDS executes the posture violation check when an existing inactive posture becomes active. This will be accomplished when the beginning effective time is equal or less then the current system time. The check is also executed if the AFATDS operator edits an existing posture, changing the effective time spans to include the current time.

3) AFATDS executes the posture violation check when a new posture is created with an associated time window and the current system falls within the time window specified by the beginning effective time and the ending effective time.
4) AFATDS determines posture directive violations by comparing current munitions status information, updates against a unit's active posture(s). AFATDS declares a posture directive violation when the munitions quantities for model level for uploaded or category level for stored in the munitions status information update(s) do not meet the cumulative required quantities and response times.
5) AFATDS supports the establishment of posture directives for FA CPs, FDCs, and Fire Units with an echelon of battery and platoon.
6) AFATDS provides the capability to create, edit, delete, and store up to twenty (20) postures for each Rocket/Missile or Other Unit.
7) AFATDS executes the posture violation check when a unit's munitions status information is updated. If the units' on-hand/uploaded quantity, less the munitions reserved for other active and postured missions is greater than or equal to the required quantity, then the unit has the required munitions.

Section II. Fire Mission Processing Procedures.

FM1. Process a When Ready Fire Mission at AFATDS.

Conditions: Given an AFATDS workstation that is activated and with a Current communications configuration active process an area fire mission.

Additional information: An area fire mission is received via data communications from an FSE/FSCC AFATDS, FA CP AFATDS, a sensor (such as radar) or, an observer. The mission may also be entered from the AFATDS keyboard. This procedure describes the basic mission process and acts a map to other procedures that may be required to carry out mission processing.

By default, all missions are set to intervention upon by the operator as results of a single rule (All). This rule can be deleted and, as a result, no operator intervention takes place. Further, intervention rules can be tailored so that some missions are intervened upon and others not.

FM1: Process a When Ready Fire Mission			
Step	**Station**	**Action**	**Result/Explanation**
1	Requestor	Composes and transmits call for fire.	The requestor may be a human or sensor device. The call for fire may be transmitted to an FSE/FSCC or FA CP AFATDS. That AFATDS may then transmit a fire order to the battery/platoon AFATDS.
If the mission is received via data communications, go to step 3.			
2.	Btry/Plt AFATDS	Complete the Initiate Fire Mission window. Click **Mission Processing/Initiate Fire Mission**. See PROCEDURE FM2. Initiate a Fire Mission at AFATDS.	
If intervention is set, the mission is placed in the IP icon of the Current window. The IP icon darkens and becomes selectable. Go to step 3. If intervention is not set, the mission is processed and the Btry/Plt AFATDS determined solution is executed by sending the appropriate messages to observer and fire unit. Go to step 4.			
3.	Btry/Plt AFATDS	Display the mission processing solution.	
a.		Click the **IP** icon on the Current window tool bar.	This procedure assumes a capable (green or yellow) option is determined. For a complete description of intervention, see Procedure FM4. Examine the Intervention Windows.

FM1: Process a When Ready Fire Mission			
Step	**Station**	**Action**	**Result/Explanation**
NOTE Ammunition reservation for a mission is created when the mission is transmitted to the weapons. If more than one mission is in intervention each mission was computed independently. In other words, if a mission is placed at intervention and a second mission is processed, ammunition assigned to the first mission is not reserved from assignment for the second mission. Avoid this problem, the AFATDS operator should display and transmit one of the missions. This causes that mission's ammunition to be considered allocated and not available. The other mission should be displayed at intervention and recalculated.			
b.		Click the **RKT/MSL Soln** tab.	Detailed mission data is displayed.
c.		Click one of the following:	
		Accept Recommendation	If coordination is required: The coordination request: 1. Is transmitted to the Establishing Unit ID (Responsible Unit ID) of the affected geometry. 2. Fails communications if no route exists, the affect unit does not possess a device that can receive a coordination request or comm fails. 3. In all cases, copied to the Coordination icon on the Current window tool bar. This allows access to override the request if voice comm is established. If no coordination was required or coordination approval was received the process transmits the solution displayed in the Recommendation to the FCSs and sends an MTO. The MTO: 1. Is placed in the Active Mission Monitor icon of the Current menu tool bar if the mission was initiated at the AFATDS. 2. Is transmitted to the observer if AFATDS has a comm route to that station, either direct or indirect. 3. Is presented to the AFATDS operator as an alert if no comm route to the requestor exists. Click the Send to Originator button on the alert to send the MTO back through the AFATDS that communicates with the observer.
		Send Selected	Units performing tactical fire control use the Send Selected option; highlight the SPLL and Click on the Send button.
		Recalculate	Displays a copy of the mission's Initiate Fire Mission window to allow changes to be made by editing and reprocessing. Mission is placed in Intervention icon with the new solution when Analyze Tgt button is selected.
		Unsupportable	Transmits the mission as a fire request to Command Unit ID for the Btry/Plt AFATDS.

FM1: Process a When Ready Fire Mission			
Step	**Station**	**Action**	**Result/Explanation**
		Deny	If the mission was entered at the AFATDS: places a copy of the Deny message in the Active Mission Messages icon of the Current menu tool bar. If the mission was received from an FSE/FSCC or FA CP: send a Deny message to that AFATDS. Deny message is queued in AFATDS' Active Mission Messages icon of the Current menu tool bar. If the mission was received directly from an observer: sends a denied MTO to observer. If the mission was received from a radar device: no response is transmitted to the radar.
4.	SPLL	Receives MLRS;CFF	
5.	Requestor	Receives and stored the MTO.	
NOTE The SPLL transmits a WILCO when the mission is processed. This message is acknowledged by AFATDS but not displayed to the operator as a message but updates the FCS Weapon Status window Launcher Response column with Wilco over a Green Background.			
6.	Btry/Plt AFATDS	Track mission status of SPLLs. Click the **MLRS Weapon Status** icon of the Current menu tool bar.	The Weapon Status MLRS window displays. See Procedure FM4. Examine the Weapon Status MLRS window for details of mission tracking on the Weapon Status MLRS window.
If the SPLL denies the mission, go to step 7. If communications with the MLRS fails: see Procedure FM8. React to a FCS Comm Failure During Mission Processing..			
7.	SPLL	Transmits mission denied.	
a.	Btry/Plt AFATDS	Transmits EOM to the SPLL.	The mission is placed in the Deny icon for reprocessing and selection of a different SPLL.
b.	Btry/Plt AFATDS	Mission is placed in the **Deny** icon on the AFATDS Current toolbar.	See Procedure FM8. React to a Denied Fire Mission.
8.	SPLL	Fire the mission.	The FCS prompts the operator to arm and fire. An MLRS; MFR is transmitted to AFATDS when the mission has been fired and launcher has been stowed.
9.	Btry/Plt AFATDS	Receives the MLRS;MFR	AFATDS performs the following: 1. Moves the target from the Active to the Inactive Target List. 2. Updates the SPLL's uploaded ammunition.

FM2. Initiate a Fire Mission at AFATDS.

Conditions: Given an AFATDS workstation that is activated and with a Current communications configuration active initiate a fire mission.

Additional information: The AFATDS operator can input the mission from the keyboard based on a voice call for fire received from a spotter. This procedure describes the entry of the call for fire by the AFATDS operator. It should be noted that this is the slower and less preferred method.

FM2: Initiate a Fire Mission			
Step	**Action**	**Result/Explanation**	
1.	Display the **Initiate Fire Mission** window.		
a.	Enter Call for fire Observer Identification and Warning Order. Enter the following:		
b.	**Observer**	Select the Unit ID of the observer.	
c.	**Mission Type**	Select the type of mission. Default is Fire For Effect.	
2	Enter the Target Location for a Grid location		
To enter a grid location, go to step 2.a. To enter a shift location, go to step 2.b.			
a.	To enter a grid location:		
1)	To enter a UTM grid: Click in the **Current Location** field.	Type the complete coordinates in the form H EEEEE LLL NNNNN AAAA GGG where H is the higher order easting, EEEEE is the short easting coordinate, LLL is the higher order northing, NNNNN is the short northing coordinate, AAAA is the altitude in meters and GGG is the grid zone.	
		OR	
2)	To enter **LAT/LONG**:	Point in the location field(s). Simultaneously press <SHIFT> and right click to change the input form of the location fields.	
3)		Type the latitude and longitude to the nearest 0.1 seconds. Go to step 3.	
		OR	
4)	To enter **MGRS**:	Point in the location field(s). Simultaneously press <SHIFT> and right click to change the input form of the location fields.	
5)		Type the location in the form GGXSSEEEEENNNNN where GG is the grid zone number, X is the grid zone letter, SS is the 100,000 meter square, EEEEE is the five digit easting and NNNNN is the five digit northing. Go to step 3.	
		Or. For a Laser Location	
b.	Click the **Polar/Laser** tab.	The Polar/Laser window frame displays.	
1)	Click the **Laser** button.	The Laser button fills in black and the Polar button is gray.	
2)	Type the OT distance in meters in the **Slant Distance** field.		
3)	Type the OT direction in mils in the **Direction** field.		
4)	Click the vertical angle in the **Vertical Angle** field.	Legal entries are –1599 to 1599. + sign is omitted for positive VA.	
5)	Click the **Apply** button. *Go to step 3.*	The fields clear and the Location field on the IFM window populates.	
3.	Enter Method of Control.		
a.	Click **Method of Control** and select the desired MOC.		
4.	Enter the Target Description.		
a.	Select **Category**	13 target categories are available. Selection defines choices of Type. Default is LOC.	
b.	Select **Type**	Allows selection of specific target type. Default is Terrain.	
c.	Select **Shape.**	Default is Point.	
		Selection:	Requires:
		Circular	Radius in meters.

FM2: Initiate a Fire Mission			
Step	**Action**	**Result/Explanation**	
		Rectangular	Length in meters. Width in meters. Attitude in meters.
		Linear	Length in meters. Attitude in meters
5.	Enter the Element to Fire.		
a.	Click **More Mission Data** tab.	The More Mission Data frame displays.	
b.	In the Fire Units section, click the **Add** button.	The Select Unit window displays listing available launchers.	
c.	Click desired launchers and click the **OK** button.	The Select Unit window closes and the selected SPLL is added to the Fire Units list.	
d.	Repeat steps 4.b. through 4.c. for each additional SPLL required.		
6.	Enter Munitions to Fire.		
a.	Click the **Munitions** tab.	The Munitions frame displays.	
b.	Click on the Category of munition in the **Shell** field and select the FFE1 rocket or missile.		
c.	Click on the munition model in the **Model** field.		
d.	Type the volume of fire in the **Rounds** field.		
7.	Click the **Analyze Tgt** button	The Initiate Fire Mission window closes and the mission is processed.	
NOTE If intervention is set, the mission is placed in the IP icon of the Current window. Otherwise, the mission is processed and the AFATDS determined solution is executed by sending the appropriate messages to observer and fire unit.			

FM3. Override Point Management during Fire Mission Processing.

Conditions: Given an AFATDS workstation that is activated and a Current communications configuration active, override point management during fire mission processing.

Additional information: AFATDS automatically manages and assigns firing point and next points for a launcher after mission completion (see Chapter 5, Section I, para. 12). The AFATDS operator can override this selection process by defining the firing point and/or the next point the SPLL occupies.

FM3: Override Point Management During Fire Mission Processing			
Step	**Station**	**Action**	**Result/Explanation**
1	Requestor	Composes and transmits call for fire.	The requestor may be a human or sensor device. The call for fire may be transmitted to an FSE/FSCC or FA CP AFATDS. That AFATDS may then transmit a fire order to the battery/platoon AFATDS.
If the mission is received via data communications, go to step 3.			
2.	Btry/Plt AFATDS	Complete the Initiate Fire Mission window. Click Mission Processing, Initiate Fire Mission. See PROCEDURES FM1 and FM2. Initiate a Fire Mission at AFATDS for entries and process. In addition, complete steps 2.a. through 2d. below.	

FM3: Override Point Management During Fire Mission Processing			
Step	**Station**	**Action**	**Result/Explanation**
a.		Click the **More Mission Data** tab.	The More Mission Data frame displays.
b		In the Rocket/Missile Point Information, click the **Rocket/Missile** Unit field and select the SPLL to fire the mission.	
c.		To override firing point assignment, click the **Fire From ID** field.	A list of all firing points assigned to the launcher is displayed.
1)		Select the firing point.	
d.		Click the **Next Point Type** field.	A selection list displays with Firing Point and Hide Point.
1)		Select the desired next point type.	The Next Point ID field becomes active.
2)		Click the **Next Point ID** field.	A list of all points assigned to the SPLL of the selected type (firing or hide point) is displayed.
3)		Select the desired next point.	
c.	After any additional entries are complete, click the **Analyze Tgt** button. Process the remainder of the mission in accordance with Procedure FM2.		
3.	Btry/Plt AFATDS	Display the mission processing solution.	
a.		Click the **IP** icon on the Current window tool bar.	This procedure assumes a capable (green or yellow) option is determined. For a complete description of intervention, see Procedure FM1. Examine the Intervention Windows
b.		Click the **RKT/MSL Soln** tab.	Detailed mission data is displayed.
c		Click the Recalculate button.	Displays a copy of the mission's Initiate Fire Mission window to allow changes to be made by editing and reprocessing.
4.	Btry/Plt AFATDS	Edit the Initiate Fire Mission window.	
a.		Click the **More Mission Data** tab.	The More Mission Data frame displays.
b.		In the Rocket/Missile Point Information, click the **Rocket/Missile** Unit field and select the SPLL to fire the mission.	
c.		To override firing point assignment, click the **Fire From ID** field.	A list of all firing points assigned to the launcher is displayed.
1)		Select the firing point.	
d.		Click the **Next Point Type** field.	A selection list displays with Firing Point and Hide Point.
1)		Select the desired next point type.	The Next Point ID field becomes active.
2)		Click the **Next Point ID** field.	A list of all points assigned to the SPLL of the selected type (firing or hide point) is displayed.

FM3: Override Point Management During Fire Mission Processing			
Step	**Station**	**Action**	**Result/Explanation**
3)		Select the desired next point.	
c.	After any additional entries are complete, click the **Analyze Tgt** button. Process the remainder of the mission in accordance with Procedure FM1.		

FM4. Examine the Intervention Windows.

Conditions: Given an AFATDS workstation that is activated and with a fire mission at intervention examine the intervention window.

Additional information:. When a fire request or fire order is processed, AFATDS determines a tactical and technical solution. If intervention is set for this type of mission (see procedure FM4. Examine Fire Mission Intervention Criteria), the solution is presented to the operator. This procedure describes the presentation of the solution.

FM4. Examine the Intervention Windows.		
Step	**Action**	**Result/Explanation**
1	Display the Intervention Window. Click the **IP icon** on the Current window tool bar.	The Intervention window displays with the Intervention tab selected.
Step	**Action**	**Result/Explanation**
2.	The following data is presented.	
	DATA	**FUNCTION**
a.	**Tgt Number**	Displays NATO target number for this mission.
b.	**Tgt Type**	Displays the target type from the fire request.
c.	**NLT**	Displays the Not Later Than time. Used to establish the Period of time that the mission can be fired. These entries are in the DTG format.
d.	**Mission Type**	Displays the mission type.
e.	**Mission Value**	Displays the mission value used to prioritize this mission (Chapter 3, Section 1 for an explanation of mission value).
f.	**Precedence**	Displays the mission precedence requested in the call for fire or based on the TMM guidance. Changing this value to P (planned) and clicking Accept Recommendation stores the target in the Planned Target List instead of processing as a fire mission and sends a denied MTO to the requestor.
g.	**View Target Information**	Displays the Basic Target Information window for this target. Allows review of target data.
h.	**Filter Result**	Displays each filter checked and the result as Pass or Fail. Selecting any filter activates the View Filter Guidance button.
i.	**View Filter Guidance**	Button is active if a filter is selected in the list above. Clicking this button displays the guidance associated with the filter.

FM4. Examine the Intervention Windows.		
Step	**Action**	**Result/Explanation**
j.	**Attack Options**	Provides color-coded indicators for each fire support type. Color codes are: **Green**: Fire support of this type can engage target within the limits of guidance and without coordination. **Yellow**: Fire support of this type can engage target within the limits of guidance but requires coordination. Red: Fire support of this type is available but cannot engage the target within the limits of guidance or is out of action or ammo. **Black**: Fire support of this type is not available.
k.	**Opt Unit ID …**	For the Attack Option button selected, all capable options are listed. The list displays the following: **Opt:** each individual option displays a unique number. Mass fire options all display the same number. **Unit ID**: displays the gun number in this option. **Munitions**: displays the Rocket/Missile munitions selected to fire. **Qty**: displays the number of rounds to fire. **Go/NoGo:** Displays Go or No Go Fire Order sent to units with Go status. Deny sent to units with No Go status. Located in the Missile Information and Intervention windows. **Crd**: Displays Y is coordination is required; N if coordination is not required.
l.	**View Coordination** button	Activates if the selected option requires coordination. Selecting the button displays the Request Coordination window. (See procedure FM10. React to a Coordination Request.)
m.	**Recommendation**	Displays the recommended option. Selection of the recommended option is the product of Attack Option Ranking found under the Mission Processing menu on the Current window.
n.	**Accept Recommendation**	Closes the Intervention window and transmits the recommended solution as displayed in the Recommendation field. Any coordination request required is transmitted prior to the FO.
o.	**Send Selected**	When Send Selected is used by units performing tactical fire control. At the platoon FDC, performing technical fire control, the mission is recalculated (see step below). Recalculation allows AFATDS to re-compute the technical solution for the desired weapons.
p.	**Recalculate Fire Mission**	Displays the Initiate Fire Mission window. This allows the operator to edit the fire mission and to cause the changes made to be considered when Analyze Tgt is selected. The Intervention window will close and the new solution is placed in the IP icon.
q.	**Deny**	Closes the Intervention window, transmits a denied MTO to the requestor and places the target in the Inactive Target List.

FM4. Examine the Intervention Windows.		
Step	**Action**	**Result/Explanation**
r.	**Unsupportable**	Closes the Intervention window, transmits the mission to the unit that commands this unit as indicated in this unit's Command Unit ID**.** This is a request for fire support from the next higher echelon.
3.	Click the **Attack Options** tab.	The following data is presented.
a.	**Meets Mission Cutoff:**	Indicates the mission meets the Fire Mission Cutoff Value set in the Mission Prioritization Guidance.
b.	**Number of Active Missions**	Displays the total number of active missions assigned to the unit.
c.	**Number of Missions with Lower Priority**	Displays the number of active missions that are assigned to the unit with a lesser mission value than this mission.
d.	**Opt---Seg?---Unit ID---Caliber**	These lists display all capable and incapable options examined for the fire support type selected. This provides a diagnostic. The headings are:
1)	**Seg?**	"Y" indicates the target is segmented. "N" indicates the target is not segmented. Note: Target segmentation occurs at the controlling OPFAC; other computers will display a blank.
2)	**Range symbol**	Range Capable? "Y" indicates the weapons and ammunition can range the target; "N" indicates the target is outside range.
3)	**Near Mask symbol**	Near Mask Violation? "Y" indicates a mask stored with the unit's weapon data is violated by this option. "N" indicates no mask violation.
4)	**Downrange Mask symbol**	Downrange Mask Violation? "Y" indicates a downrange mask geometry is violated by this option; "N" indicates no violation.
5)	**Clock symbol**	Response Time Capable? "Y" indicates that considering the unit response time and all missions previously assigned of equal or greater mission value, the unit can engage before the NLT time expires.
6)	**Projectile symbol**	Munitions Capable? "N" indicates the unit does not possess the ammunition for this option or the mission requires massing of fires and massing is prohibited by guidance entries.
7)	**Angle T symbol**	Angle T capable? Applies only to 155mm Copperhead missions. "N" indicates angle T is greater than 800 mils.
8)	**Hand-shake symbol**	Requires Coordination? "Y" requires coordination; "N" does not.
9)	**Restriction symbol**	Is the unit unrestricted? "N" indicates the unit is restricted from firing the mission in System Tasks guidance.
10)	**Weapon symbol**	Can the unit achieve desired effects? "N" indicates desired effects requested in the FR or in the TMM guidance cannot be achieved. This is blank if the target is a volleys type.
11)	**System symbol**	Is the FS system appropriate for the mission? Air and rocket/missile units are inappropriate for adjust missions.
a)	**Munitions** section.	When an option is selected in the Unit ID list, the munition data for that option is displayed. This may be blank if the SPLL was deemed incapable prior to selection of ammunition.
b)	**Unit Data** section	When a unit is selected in the Unit ID list, Range in meters, Reaction Time in minutes, Angle T in mils and Operational Status is displayed for that unit.

FM4. Examine the Intervention Windows.		
Step	**Action**	**Result/Explanation**
c)	**Send** button	Selecting this button sends the option selected in the Unit ID list and closes all intervention windows.
d)	**OTF/FO…** button	Displays the OTF/FO window. The operator can direct munitions and quantity and select a Send To unit. Clicking Send transmits the mission as a fire request to the selected unit and closes all intervention windows.
4.	Click the **RKT/MSL Soln** tab.	The following data is presented.
	The following data is presented.	
	DATA	FUNCTION
a.	**UNIT ID**	Displays the unit associated with the attack options selected on the Intervention tab.
b.	**Attack Option**	The number of the attack option that is reviewed. This allows the operator to correlate this data with a numbered attack option on the Intervention tab.
c.	**Aimpoint**	Displays the center aimpoint location for this option in UTM form. This cannot be toggled to MGRS or LAT/LONG.
d.	**Munition Model** and **Munition Type**	Displays the rocket/missile nomenclature and “J-code” or missile type, respectively.
e.	**QTY**	Qty indicates the total number of munitions to fire.
f.	**MOC**	Shows the method of control to be exercised in the mission.
g.	**Firing Point**	The assigned firing point the launcher from which the launcher will execute the mission.
h.	**TOF**	The time of flight for the munitions.
i.	**Aimpoint #**	The lower portion of the window displays additional aimpoint information that is populated if target is segmented.
j.	**Easting Shift**	The easting displacement, in meters, of the aimpoint from the target center.
k.	**Northing Shift**	The northing displacement, in meters, of the aimpoint from the target center.
l.	**Altitude**	The altitude of the aimpoint.
m.	**# Rounds**	The number of rockets to be fired at the aimpoint.

FM5. Examine the Weapon Status MLRS Window.

Conditions: Given an AFATDS workstation that is activated and with a fire mission transmitted to the launchers’ FCSs examine the Weapon Status FCS window.

Additional information: The Weapon Status FCS window maintains status of each fire mission with respect to mission messages sent to the FCSs and their responses. This window also allows entry of fire mission reports received by voice from launchers with FCSs that are down.

FM5. Examine the Weapon Status FCS MLRS Window.		
Step	Action	Result/Explanation
1	Display the Intervention Window. Click the **FCS Weapon Status icon** on the AFATDS Current window tool bar.	The FCS Weapon Status window displays. The window displays the following:
2	**Weapon and Points**	The top portion of the window displays the status of each SPLL.
a.	**Unit ID**	The first three characters of the launcher name (AFATDS UNIT ID in the MUL) with a slash between each character.

FM5. Examine the Weapon Status FCS MLRS Window.		
Step	Action	Result/Explanation
b.	**WPN Model**	M270 or M270A1 as defined in the SPLL unit's detailed unit information.
c.	**Op Status**	Last report operational status of the unit as defined in the SPLL unit's detailed unit information.
d.	**Mun Model**	Displays the status of uploaded ammunition for each launcher.
e.	**Munition Type**	
f.	**Munition QTY**	
g.	**Pri MSN**	Displays the target number of a immediate priority mission, if assigned to that SPLL. Weapons with immediate priority missions will be displayed at the top of those listed.
h.	**# Msns Asngd**	The total number of fire missions assigned to the SPLL.
i.	**Point Type**	The type of point the launcher currently occupies.
j.	**Point ID**	The identity of the point as stored as the point
3.	**Assigned Fire Missions**	When a launcher is selected in the upper display, the lower display populates with mission data for all missions assigned to that launcher.
a.	**Target Number**	The target number of the assigned mission.
b.	**MOC**	The method of control assigned to the mission.
c.	**NET/TOT**	The not-earlier-than time, or time-on-target time for the mission. This is blank for all other methods of control.
d.	**NLT**	The not-later-than time assigned to the mission.
e.	**Status**	The current reported status of the SPLL as indicated in the unit's detailed unit information.
f.	**# Rnds**	The number of rockets or missile to fire.
g.	**Next Point Type**	The type of the next point to which the launcher is directed to move.
h.	**Next Point ID**	Displays the ID of the next point assigned to the launcher. Field is blank if no point assignment has been made.
i.	**Launcher Response**	Display Wilco response received from the SPLL for this mission (displayed with green background).
4.	The following buttons are available:	

FM5. Examine the Weapon Status FCS MLRS Window.		
Step	Action	Result/Explanation
a.	**Edit**	Becomes active when a SPLL is selected in the list at the top of the window. When selected, displays the unit data for the selected SPLL.
b.	**SPLL Commands**	Becomes active when a SPLL is selected in the list at the top of the window. When selected, displays the SPLL Command window used to send commands to the launcher.
c.	**Request Status**	Becomes active when a SPLL is selected in the list at the top of the window. When selected, displays the FCS Request Message window used to send requests for information to the selected SPLL.

FM6. Process an At My Command Fire Mission at AFATDS.

Conditions: Given an AFATDS workstation that is activated and with a Current communications configuration active process an area fire mission.

FM6: Process an At My Command Fire Mission			
Step	Station	Action	Result/Explanation
1	Requestor	Composes and transmits call for fire.	The requestor may be a human or sensor device. The call for fire may be transmitted to an FSE/FSCC or FA CP AFATDS. That AFATDS may then transmit a fire order to the battery/platoon AFATDS.
If the mission is received via data communications, go to step 3.			
2.	Btry/Plt AFATDS	Complete the Initiate Fire Mission window. Click **Mission Processing\Initiate Fire Mission**. See PROCEDURE FM2. Initiate a Fire Mission at AFATDS.	
If intervention is set, the mission is placed in the IP icon of the Current window. The IP icon darkens and becomes selectable. Go to step 3. If intervention is not set, the mission is processed and the Btry/Plt AFATDS determined solution is executed by sending the appropriate messages to observer and fire unit. Go to step 4.			
3.	Btry/Plt AFATDS	Display the mission processing solution.	
a.		Click the **IP icon** on the Current window tool bar.	This procedure assumes a capable (green or yellow) option is determined. For a complete description of intervention, see Procedure FM4. Examine the Intervention Windows
b.		Click the **RKT/MSL Soln** tab.	Detailed mission data is displayed.
c.		Click one of the following:	
		Accept Recommendation	If coordination is required: The coordination request: 1. Is transmitted to the Establishing Unit ID (Responsible Unit ID) of the affected geometry. 2. Fails communications if no route exists, the affect unit does not possess a device that can receive a coordination request or comm fails. 3. In all cases, copied to the Coordination icon on the Current window tool bar. This allows access to override the request if voice comm is established. If no coordination was required or coordination approval was received, Transmits the solution displayed in the Recommendation to the FCSs and sends an MTO. The MTO: 1. Is placed in the Active Mission Monitor icon of the Current menu tool bar if the mission was initiated at the AFATDS. 2. Is transmitted to the observer if AFATDS has a comm route to that station, either direct or indirect. 3. Is presented to the AFATDS operator as an alert if no comm route to the requestor exists. Click the Send to Originator button on the alert to send the MTO back through the AFATDS that communicates with the observer.
		Send Selected	Units performing tactical fire control use the Send Selected option. At the platoon FDC, performing technical fire control, the mission is recalculated (see step below). Recalculation allows AFATDS to re-compute the technical solution for the desired weapons.
		Recalculate	Displays a copy of the mission's Initiate Fire Mission window to allow changes to be made by editing and reprocessing. Mission is placed in Intervention icon with the new solution when Analyze Tgt button is selected.

FM6: Process an At My Command Fire Mission			
Step	Station	Action	Result/Explanation
		Unsupportable	Transmits the mission as a fire request to Command Unit ID for the btry/plt AFATDS.
		Deny	If the mission was entered at the AFATDS: places a copy of the Deny message in the Active Mission Messages icon of the Current menu tool bar. If the mission was received from an FSE/FSCC or FA CP: sends Deny message to that AFATDS. Deny message is queued in that AFATDS' Active Mission Messages icon of the Current menu tool bar. If the mission was received directly from an observer: sends a denied MTO to observer. If the mission was received from a radar, no response is transmitted to the radar.
4.	SPLL	Receives MLRS;CFF	
5.	Requestor	Receives and stored the MTO.	
NOTE The SPLL transmits a Wilco when the mission is processed. This message is acknowledged by AFATDS but not displayed to the operator as a message but updates the FCS Weapon Status window Launcher Response column with Wilco over a green background.			
6.	Btry/Plt AFATDS	Click the **MLRS Weapon Status icon** of the Current menu tool bar. Track mission status of SPLLs.	The Weapon Status MLRS window displays. See Procedure FM4. Examine the Weapon Status MLRS Window for details of mission tracking on the Weapon Status MLRS window.
7.	SPLL	Transmit "Ready" report.	Ready is transmitted by the FCS after aiming is complete
a.	Btry/Plt AFATDS	Receive "Ready" report.	The Active Mission Monitor icon darkens.
b.	Requestor	Transmit "Fire" command.	The requestor commands "Fire" any time after the "Ready" report is received. If the local AFATDS is the requestor, go to step 7.c, if another station requested the mission, go to step 7d.
c.	Btry/Plt AFATDS	Click the **Active Mission Monitor.**	The Commands window displays. The Target Number field displays the current target number and the Fire Status field displays Ready.
1)		Click the **Fire** button.	The FCS prompts the operator to arm and fire. An MLRS MFR is transmitted to AFATDS when the mission is ended. Go to Step 8.
d.	Btry/Plt AFATDS	Receive "Fire" command.	AFATDS automatically transmits the "Fire" command to the FCS..
e.	SPLL	Transmits Wilco message.	The FCS prompts the operator to arm and fire. An MLRS MFR is transmitted to AFATDS when the mission has been fired. Go to Step 9
8.	Btry/Plt AFATDS	End the mission.	
a.	Btry/Plt AFATDS	Receives the MLRS;MFR	AFATDS performs the following: 1. Moves the target from the Active to the Inactive Target List. 2. Updates the SPLLs uploaded ammunition.

FM7. Process a Time on Target Fire Mission at AFATDS.

Conditions: Given an AFATDS workstation that is activated and with a Current communications configuration active process an area fire mission.

FM7: Process a Time on Target Fire Mission			
Step	Station	Action	Result/Explanation
1	Requestor	Composes and transmits call for fire.	The requestor may be a human or sensor device. The call for fire may be transmitted to an FSE/FSCC or FA CP AFATDS. That AFATDS may then transmit a fire order to the battery/platoon AFATDS.
If the mission is received via data communications, go to step 3.			
2.	Btry/Plt AFATDS	Complete the Initiate Fire Mission window. Click Mission **Processing\Initiate Fire Mission**. See PROCEDURE FM2. Initiate a Fire Mission at AFATDS.	
If intervention is set, the mission is placed in the IP icon of the Current window. The IP icon darkens and becomes selectable. Go to step 3. If intervention is not set, the mission is processed and the Btry/Plt AFATDS determined solution is executed by sending the appropriate messages to observer and fire unit. Go to step 4.			
3.	Btry/Plt AFATDS	Display the mission processing solution.	
a.		Click the **IP icon** on the Current window tool bar.	This procedure assumes a capable (green or yellow) option is determined. For a complete description of intervention, see Procedure FM4. Examine the Intervention Windows
b.		Click the **RKT/MSL Soln** tab.	Detailed mission data is displayed.
c.		Click one of the following:	
		Accept Recommendation	If coordination is required: The coordination request: 1. Is transmitted to the Establishing Unit ID (Responsible Unit ID) of the affected geometry. 2. Fails communications if no route exists, the affect unit does not possess a device that can receive a coordination request or comm fails. 3. In all cases, copied to the Coordination icon on the Current window tool bar. This allows access to override the request if voice comm is established. If no coordination was required or coordination approval was received: Transmits the solution displayed in the Recommendation to the FCSs and sends an MTO. The MTO: 1 Is placed in the Active Mission Monitor icon of the Current menu tool bar if the mission was initiated at the AFATDS. 2 Is transmitted to the observer if AFATDS has a comm route to that station, either direct or indirect. 3 Is presented to the AFATDS operator as an alert if no comm route to the requestor exists. Click the Send to Originator button on the alert to send the MTO back through the AFATDS that communicates with the observer.

FM7: Process a Time on Target Fire Mission			
Step	Station	Action	Result/Explanation
		Send Selected	Units performing tactical fire control use the Send Selected option. At the platoon FDC, performing technical fire control, the mission is recalculated (see step below). Recalculation allows AFATDS to re-compute the technical solution for the desired weapons.
		Recalculate	Displays a copy of the mission's Initiate Fire Mission window to allow changes to be made by editing and reprocessing. Mission is placed in Intervention icon with the new solution when Analyze Tgt button is selected.
		Unsupportable	Transmits the mission as a fire request to Command Unit ID for the btry/plt AFATDS.
		Deny	If the mission was entered at the AFATDS: places a copy of the Deny message in the Active Mission Messages icon of the Current menu tool bar. If the mission was received from an FSE/FSCC or FA CP: sends Deny message to that AFATDS. Deny message is queued in that AFATDS's Active Mission Messages icon of the Current menu tool bar. If the mission was received directly from an observer: sends a denied MTO to observer. If the mission was received from radar: no response is transmitted to the radar.
4.	SPLL	Receives MLRS;CFF	
5.	Requestor	Receives and stored the MTO.	
NOTE The SPLL transmits a WILCO when the mission is processed. This message is acknowledged by AFATDS but not displayed to the operator as a message but updates the FCS Weapon Status window Launcher Response column with Wilco with a green background.			
6.	Btry/Plt AFATDS	Track mission status of SPLLs.	Click the MLRS Weapon Status icon of the Current menu tool bar. The Weapon Status MLRS window displays. See Procedure FM4. Examine the Weapon Status MLRS Window for details of mission tracking on the Weapon Status MLRS window.
If the SPLL denies the mission, go to step 7. If communications with the MLRS fails: see Procedure FM12. React to a FCS Comm Failure During Mission Processing.			
7.	SPLL	Transmits mission denied.	
a.	Btry/Plt AFATDS	Transmits EOM to the SPLL.	The mission is placed in the Deny icon for reprocessing and selection of a different SPLL.
b.	Btry/Plt AFATDS	Mission is placed in the Deny icon on the AFATDS Current toolbar.	See Procedure FM8. React to a Denied Fire Mission.
8.	SPLL	Fire the mission.	The FCS prompts the operator to arm and fire based on the TOT time. An MLRS MFR is transmitted to AFATDS when the mission is ended.
9.	Btry/Plt AFATDS	Receives the MLRS;MFR	AFATDS performs the following: 1. Moves the target from the Active to the Inactive Target List. 2. Updates the SPLLs uploaded ammunition.

FM8. React to a Denied Fire Mission.

Conditions: Given an AFATDS workstation that is activated and with an active fire mission react to a denied fire mission.

Additional information: During firing battery/platoon operations fire missions may be denied by the AFATDS operator or as a result of medium level communications failure alerts that are aborted by the operator. This procedure describes operator actions in these events.

Procedure FM8: React to a Denied Fire Mission		
Step	Action	Result/Explanation
1.	If the AFATDS operator denies the missions selecting the DENY button at intervention or accepting a recommendation of deny:	
a.	If the mission was received from an observer or another OPFAC:	The Intervention window closes and a denied MTO is transmitted. If the sender is an AFATDS OPFAC, the mission is placed in that AFATDS's Deny icon on the Current menu tool bar for that station to take action.
b.	If the mission was initiated from the keyboard or was received from a RADAR.	The Deny icon on the Current menu tool bar becomes active and its counter increments.
1)	Click the **Deny** icon.	The Mission Denied window displays. (If multiple denied missions remain unresolved, a selection list displays and the appropriate target number's request must be selected.)
2)	Click the **OK** button. (No other action is allowed.)	The Mission Denied window closes. The mission is moved from the Active Target List to the Inactive Target List.
2.	If the mission fails communications to the FCS and the operator selects Abort on the medium level failed communications alert:	
a.		The Deny icon on the Current menu tool bar becomes active and its counter increments.
b.	Click the **Deny** icon.	The Mission Denied window displays. (If multiple denied missions remain unresolved, a selection list displays and the appropriate target number's request must be selected.)
c.	To re-compute the mission: Click the **Reprocess** button.	The Mission Denied window closes and the mission is recomputed and the solution placed in the IP icon of the Current menu tool bar. No message is sent to the observer until the operator, for the mission at intervention executes the decision.
d.	To deny the mission: Click the **OK** button.	The Mission Denied window closes and a denied MTO is transmitted to the observer. The mission is moved from the Active Target List to the Inactive Target List.

FM9. Reassign an Active Mission.

Conditions: Given an AFATDS workstation that is activated and with an active fire mission reassign an active mission.

Additional information: AFATDS allows a fire mission to be ended and reprocessed after fire orders have been transmitted. This process causes an end-of-mission to be transmitted to the SPLL(s) that received the fire order and results in the mission being placed in the Denied icon of the AFATDS Current toolbar for reprocessing.

The SPLL reacts to this process under the same rules as a Denied mission. Launcher sends Responses to AFATDS with an additional Mission Denied message. The operator continues to reprocess the mission via the Denied icon of the Current menu. This procedure can be used to regenerate the fire orders to the SPLL of choice or to retransmit the original firing data to SPLL(s) when deleted.

FM9: Reassign an Active Mission		
Step	Action	Result/Explanation
1.	Click **Target** icon on the AFATDS Current toolbar.	The Current Active Target List displays.
a.	Click the **Target Type** of the target to be reassigned.	Target data is highlighted.
b.	Click **Target\Target Actions\ Reassign**.	This action causes the Mission Denied icon to darken and increment. The Active Target List window remains displayed.
c.	Click the **Mission Denied** icon.	Mission Denied window displays
d.	Click the **Reprocess** button	The Mission Denied window closed. The mission is moved from the Active Target List to the Inactive Target List. EOM is sent to the SPLL,
e.	The SPLL sends a Wilco message Followed with a Denied message.	
f.	AFATDS displays the Denied alert message to the operator.	
g.	Click **OK** on the alert message**.**	Denied alert window closes. At this time the IP icon has darkened and the mission count incremented.
h.	Click the **IP** icon.	The Intervention window displays.
i	Make the following entry:	The operator selects to Accept Recommendations, Recalculate the mission, or Deny the mission.
1)	Click **Accept Recommendations**.	Firing data is transmitted to SPLL(s), continue to process the mission and transmit firing data.
2)	Click **Recalculate**.	The Initiate Fire Mission displays.
a)	Click **More Mission Data** tab.	More Mission Data window displays.
b)	Click **Add** button under Fire Units and select Fire Unit from list and **OK** the window.	The Select Unit window displays with list of units in the Current Situation.
c)	Click **Analyze Tgt**. Button.	The Initiate Fire Mission window closes and the IP icon darkens and increments.
d)	Click the **IP** icon.	The Intervention window displays. Continue to process the mission.
3)	Click **Deny** button.	The Intervention window closes.
4).	Click the **Cancel** button on the Current Active Target List window.	The target list closes.
2.	At this point, the target has been placed in the Denied Missions icon of the AFATDS Current toolbar – no additional messages have been sent to the SPLL.	
a.	Click the **Deny** icon.	The Mission Denied window displays. (If multiple denied missions remain unresolved, a selection list displays and the appropriate target number's request must be selected.)
d.	Click the **OK** button.	The Mission Denied window closes.

FM10. React to a Coordination Request.

Conditions: Given an AFATDS workstation that is activated and with a fire mission requiring coordination react to a coordination request.

Additional information: AFATDS identifies a need for coordination of fires if FSCMs, ZORs or operator established coordination of fires rules that have been violated. When coordination is required, indicated by a yellow option at intervention, AFATDS automatically formats and attempts to transmit the coordination request before transmitting the fire commands to the FCS. The operator may be required to take additional action in the following cases:

1. The coordination request cannot be sent to the coordinating agency because that agencies digital device cannot accept a coordination request.
2. The coordinating agency does not possess a digital device.
3. Data communications with the coordinating agency have failed.

This procedure describes those actions available to the operator in the event coordination of the mission is required.

FM10: React to a Coordination Request		
Step	Action	Result/Explanation
1.	With a fire mission at intervention, determine the violation.	
a.	Click the **IP** icon on the Current menu tool bar.	The Intervention window displays.
b.	Click the **View Coordination** button.	The Request Coordination window displays.
c.	Click a **Unit** name under the Responsible Unit ID list.	A blue box appears around the name. All measures or rules violated and requiring coordination by the selected unit appears in the Type and Name columns. Type displays the type of measure or COF for violations of clearance of fires rules. Name displays the name of the violated measure. Note that more than one unit ID may appear if geometry belonging to several units is violated.
d.	Possible operator actions at this point are:	
1)	Click the **geometry name** in the Name list and then click the **Geometry Info** button.	View the violated geometry.
2)	**Override** coordination and continue mission.	This action is accomplished by clicking the Status button and selecting Override in place of Violated. When the window is OK'd and the mission at intervention is sent to the FCSs, AFATDS assumes coordination has been achieved. WARNING-This action should only be taken when directed by a proper coordinating agency. Overriding coordination may threaten friendly troops.
3)	**Deny** the mission.	This action is accomplished by clicking the Status button and selecting Deny in place of Violated.
4)	Transmit the coordination request to the affected unit(s). Click the **Send** button.	AFATDS will not send the fire commands to the FCS until coordination response is received.
5)	Take no action. This is accomplished by clicking **OK**.	The Intervention window displays.

FM10: React to a Coordination Request		
Step	Action	Result/Explanation
2	Transmit the coordination request.	This action can occur by selecting Send from the Request Coordination window or selecting Accept Recommendation or Send from the Intervention window. A copy of the Request Coordination window is preserved in the Coordination icon of the Current menu tool bar.
3.	If coordination request fails communications:	
a.	A failed communication alert displays: Click **Retry** to re-send the message or Abort to manually react.	
b.	Click the **Coordination** icon.	The Request Coordination window displays. (If multiple coordination requests remain unresolved, a selection list displays and the appropriate target number's request must be selected.)
c.	Possible operator actions at this point:	
1)	Approve the mission locally. Click the **Status** button and select **Override** in place of Requested.	WARNING, this action should only be taken when directed by a proper coordinating agency since overriding coordination may threaten friendly troops. The fire commands and MTO are transmitted.
2)	Deny the mission. Click the **Status** button and select **Deny** in place of Requested.	This causes the mission to be placed in the Denied icon in the Current menu tool bar.

FM11. Process End of Mission during Degraded Comm Operations.

Conditions: Given an AFATDS workstation that is activated and with an active fire mission and failed data communications with the observer process an end of mission.

Additional information: In the event that data communications with the requestor are lost or the requestor does not possess a digital device, the AFATDS operator can receive voice of end of mission.

FM11: Process End of Mission during Degraded Comm Operations.		
Step	Action	Result/Explanation
1.	On the AFATDS Current toolbar, click **Targets.**	The Target List window displays the Current Active Target List..
2.	Select the desired active target by clicking the **Target Data** in the Target Type column.	The target data is highlighted.
3.	On the Target List window menu bar, click **Target\Target Actions\End Of Mission**.	The End Of Mission window displays.

FM11: Process End of Mission during Degraded Comm Operations.		
Step	Action	Result/Explanation
4.	Click **Disposition** and select the observed BDA, if any.	Selections are: (blank space representing “unknown”) Neutralized Burning Destroyed No Effects Neutralized Burning Suppressed
5.	Click the **Casualties** field and type the reported number of casualties.	Legal entries are 0 to 9999.
To end the mission and record as target, go to step 6. To end the mission without recording as a target, go to step 7.		
NOTE Special consideration should be given to the Weapon type (MLRS) before performing the following procedures. Munitions Effects, Tgt. Mobility, Mission disposition, and Tgt Type are some of the mission characteristics for consideration. The operator must transmit the firing data to the SPLL(s) and receive an ACK before continuing the process.		
6.	Click the Record as Target check box.	A check appears in the box and the Refinement selections in the Options menu become active.
a.	Click **Options**, **Refinement**.	The Shift window displays. The Shift From: Last Round button is selected by default causing the refinement to plot from the last reported aimpoint.
b.	Click the **Deviation** button and select the direction of the lateral refinement.	Selections are, Left, Right or blank space representing “None”.
c.	Click the field to the **right of Deviation** field and type the lateral shift.	Legal entries are 0 to 9999 meters.
d.	Click the **Range** field and select the direction of the shift.	Selections are Add, Drop and blank space representing “None.”
e.	Click the field to the **right of Range** field and type the range refinement.	Legal entries are 0 to 9999 meters.
f.	Click the **HOB** field and select the direction of the height of burst refinement.	Selections are Up, Down and blank space representing “None.”
g.	Click the field to the **right of HOB** field and type the height of burst refinement.	Legal entries are 0 to 9999 meters.
h.	Click **OK**.	The Shift window closes and the End of Mission window displays.
7.	Click **OK**.	The End of Mission window closes. The following occur: 1. End of mission is transmitted to the FCSs. 2. A Mission Fired Report is created and placed in the Active Mission Messages icon. 3. The mission is moved from the Active Target list to the Inactive Target List or to the On Call Target List, if RAT was selected. 4. The target stored on the Inactive Target List possesses the original location. 5. If the target was recorded to the On Call Target List, the location reflects total corrections determined during the mission.

FM12. React to FCS Comm Failure during a Fire Mission.

Conditions: Given an AFATDS workstation that is activated and with an active fire react to FCS Comm failure during a fire mission.

Additional information: In the event that data communications with the FCS fails during a fire mission, voice communications can be used to continue the mission. The following procedures describe the process used to continue the mission using voice communications to the launchers. AFATDS requires an ACK from the SPLL(s) in order to perform an EOM. Without receiving an EOM at AFATDS the operator must end the mission using the Mission Fired Report.

FM12: React to FCS Comm Failure During a Fire Mission			
Step	Station	Action	Result/Explanation
1	Btry/Plt AFATDS	Transmits fire commands to the FCS. Communications with the FCS fails.	A beep sounds. The M: field of the alerts panel increments and a medium level alert is queued. If the Medium Level Alerts are Suspended: the operator must click the **M**: field to access the Medium Level Alert List and click the **alert and View**. If the Medium Level Alert List is already displayed: the operator clicks **Refresh**, selects the alert and clicks **View**. If the Medium Level Alert list is not displayed and medium level alerts are not Suspended: The alert opens on the screen.
2.	Btry/Plt AFATDS	React to the displayed Failed Transmission Alert.	The alert states: "Transmission of (tgt #) Fire Order to (SPLL name) failed."
a.		Click the **OK** button.	The alert remains in the Medium Level Alert List. If Abort is selected, the mission is placed in the Deny icon of the Current menu tool bar and must be re-processed.
b.		Click **OK** on the Medium Level Alert List.	The Medium Level Alert List closes.
2.	Btry/Plt AFATDS Operator	Establish voice communications with the FCS.	
3.	Btry/Plt AFATDS	Announce fire mission.	
4.	SPLL	Report mission has been fired.	
5.	Btry/Plt AFATDS	End the mission.	
a.		On the AFATDS Current toolbar, click **Targets.**	The Target List window displays the Current Active Target List.
b.		Select the target by clicking the target data in the **Target Type** column.	The target data is highlighted.
c.		On the Target List window menu bar, click **Target\Target Actions\Mission Fired Report.**	The Mission Fired Report window displays.
d.	Btry/Plt AFATDS	Click **Munitions & Fire Units** button.	The Munitions & Fire Units window displays.

FM12: React to FCS Comm Failure During a Fire Mission			
Step	Station	Action	Result/Explanation
e	Btry/Plt AFATDS	Click **FFE Shell #1** and **Select** buttons.	The Select FFE Shell window displays.
1)		Select the Munitions category reported from the SPLL(s) and Click the **OK** button.	The Select FFE Shell window closes.
2)		On the Munitions & Fire Units window Click **#Shells**, enter reported rounds from the SPLL(s) and Click the **OK** button.	The Munitions & Shell window closes.
f		Click the **OK** button.	The Mission Fired Report window closes. The Target is moved from the Current Active Tgt. List to the Current Inactive Target List.

FM13. Receive and Process Check Firing and Cancel Check Firing.

Conditions: Given an AFATDS workstation that is activated and with an active fire mission initiate and cancel Check Firing.

Additional information: The AFATDS operator can initiate and cancel two forms of Check Firing. "Check Firing All" places all missions in the computer into a Check Firing status. Any missions received during this period are added to the active target list but not processed to intervention until the Check Firing is lifted. In addition, the operator may Check Firing a specific target.

FM13. Receive and Process Check Firing and Cancel Check Firing			
Step	Station	Action	Result/Explanation
1	Btry/Plt AFATDS	Receives Check Firing Command from another station.	The following occur: 1. A beep sounds. 2. An Information Message displays indicating: "(DTG) Check Fire All" or "(DTG) Check Fire (TGT #)" 3. Check Firing is transmitted to the SPLLs. 4. For Check Firing All commands only, Check Firing All displays on the Current menu tool bar.
a.		Click **OK** on the Information Message.	The Information Message window closes.
3.	SPLL.	Receives check-firing command.	
4.	Btry/Plt AFATDS	Receives Cancel Check Firing Command from another station.	The following occur: 1. A beep sounds. 2. An Information Message displays indicating: "(DTG) Cancel Check Fire All" 3. Cancel Check Firing is transmitted to the SPLLs. 4. For Cancel Check Firing All commands only, Check Firing All is removed from the Current menu tool bar.

FM13. Receive and Process Check Firing and Cancel Check Firing			
Step	Station	Action	Result/Explanation
a.		Click **OK** on the Information Message.	The Information Message window closes.
b.		Click the **MLRS Weapon Status** icon on the Current menu tool bar.	The Weapon Status MLRS window displays.
c.		In the Target Number column, click the fire mission's **Target Number**.	The target data highlights and the current FCS status for the mission displays.
d.		Click the **Fire Commands** button.	The Fire Command (TGT #) window displays.
e.		Click the fire commands for each SPLL and select **Send**.	Fire Commands are transmitted to the FCSs.
NOTE Missions received while in a Check Firing all status do not display at intervention. When Cancel Check Firing All is received, these missions are then queued at intervention.			

FM14. Initiate and Cancel Check Firing.

Conditions: Given an AFATDS workstation that is activated and with an active fire mission initiate and cancel Check Firing.

Additional information: The AFATDS operator can initiate and cancel two forms of Check Firing. "Check Firing All" places all missions in the computer in a Check Firing status. Any missions received during this period are added to the active target list but not processed to intervention until the Check Firing is lifted. In addition, the operator may Check Firing a specific target.

FM14: Initiate and Cancel Check Firing		
Step	Action	Result/Explanation
To initiate Check Firing, go to step 1. To cancel Check Firing, go to step 2.		
1.	On the Main Menu bar, click **Check Firing.**	The Check Firing window displays.
a.	To check fire-all, click the **All** button and click **OK**.	Check Firing is transmitted to the FCSs.
b.	To check fire a specific target number, click the Target Number field and type the target number and click **OK**.	Check Firing is transmitted to the FCSs and the AFATDS Current toolbar is updated with Check Firing All (between the Destination and Units icons).
2.	Click Messages, **Cancel Check Firing**.	The Cancel Check Firing window displays.
a.	To cancel check fire all, click the **All** button and click **OK**.	Cancel Check Firing is transmitted to the FCSs and the AFATDS Current toolbar is updated with blank space (between the Destination and Units icons). Any missions received while the AFATDS was in Check Firing will be placed at intervention.

FM14: Initiate and Cancel Check Firing		
Step	Action	Result/Explanation
b.	To cancel check fire a specific target, click the Target Number field and type the target number and click **OK**.	Cancel Check Firing is transmitted to the FCSs. Fire commands can now be re-transmitted.

FM15. Establish Meteorological Message Distribution to SPLLs.

Conditions: Given an AFATDS workstation that is powered, with AFATDS started, activated and with the current situation establish meteorological message distribution to SPLLs.

Additional Information: AFATDS distributes met messages to units based on the originator of the met message and the entry in the MET UNIT ID field of a destination unit. The unit controlling the SPLLs (battery FDC or POC) determines which meteorological station supports the unit. Each SPLLs unit data is then edited. The SPLLs General folder, Met Unit ID field is set to identify the supporting meteorological station. Note the entry in this field is not distributed with unit data. This prevents units up the chain of command from all sending the same met message to the destination SPLL.

When a met message is received, the original source met station (not the transmitting unit) is checked to determine if any unit in the database requires met messages from this station. If a unit is found with that met station in the Met Unit ID field, the met message is transmitted to the unit. NOTE met messages are not transmitted to the SPLL each time a fire mission is sent. Met messages are only updated when a new message is received.

FM15: Establish Meteorological Message Distribution to SPLLs		
Step	Action	Result/Explanation
1.	On the AFATDS Current toolbar, click the **FCS Weapons Status** icon, select and double Click the desired SPLL unit.	The Unit Workspace/Basic Data/Unit window for the SPLL displays.
2.	Click the **General Data** folder from the Menu tree left of the unit window.	The Unit ID field displays general data.
3.	Click the **Met Unit ID** field and select the unit ID of the supporting met station.	The Met Unit ID field displays the name of the selected met station.
4.	Click **Options\Save** to store the data.	The Unit data is stored.
5.	Click **Options\Exit**	The Unit Workspace/Basic Data/Unit window closes.

FM16. Enter a Computer Meteorological Message.

Conditions: Given an AFATDS workstation that is powered, with AFATDS started, activated and with the current situation enter a computer meteorological message.

Additional Information: AFATDS uses a current computer meteorological message for the computation of firing data. The preferred method of met message entry is reception via digital communications (see Procedure FM17. Receive A Computer Meteorological Message). When digital communications are not possible, the met message can be received by voice communications and manually entered into AFATDS.

FM16: Enter a Computer Meteorological Message		
Step	Action	Result/Explanation
1.	On the AFATDS Current toolbar, Click **Met**, **View CM**.	The View CM MET window displays with the current met message data.
2.	Click the **Name** field and type a unique name for the met message.	Multiple met messages can be stored. A unique name assists the operator in identifying the met message.
3.	Type the beginning of the period of validity in the **Valid From** field.	The DTG is entered in the form DDHHMMZMONYY where DD is the date, HH is the hours, MM is minutes past the hour, Z is the time zone, MON is the month and YY is the year.
4.	Type the end of the period of validity in the **Valid to** field.	The DTG is entered in the form DDHHMMZMONYY where DD is the date, HH is the hours, MM is minutes past the hour, Z is the time zone, MON is the month and YY is the year.
NOTE The operator must ensure the valid times do not exceed 6 days, 22 hrs.		
5.	Type the latitude of the Met station in the **Latitude** field.	The latitude is entered in tenths of degrees. For example, 34.5^{o} is entered as 345. Location of the latitude in the North or South hemisphere is determined by the entry in Global Octant.
6.	Type the longitude of the Met station in the **Longitude** field.	If the longitude is greater than 100, 100 is subtracted to encode. The remaining value is entered in tenths of degrees. For example, 128.7^{o} is entered as 287. Location of the latitude in the East or West hemisphere is determined by the entry in Global Octant.
7.	Type the altitude of the Met station in the **Altitude** field.	The altitude is entered in tens of meters. For example, a met station altitude of 640 meters is entered as 064.
NOTE Correct entry of met station altitude is crucial to the computation of safe and accurate firing data. AFATDS compares the met station and battery altitudes and adjusts the meteorological data to the altitude of the battery. Gross errors in height result in errors in correction computed for non-standard atmospheric conditions.		
8.	Type the MDP pressure in the **Atmospheric Pressure** field.	Pressure is entered in millibars. If the pressure exceeds 1000 millibars, only the last three digits are entered.
9.	Click the **Global Octant** field and select the appropriate octant in which the met station is located.	Octant further defines the Lat/Long location of the Met station allowing for shorter encoding of met messages.
10.	For each line, enter the following	
a.	**Wind Dir**	Type the wind direction in tens of mils true azimuth. For example, an azimuth 0f 3210 is entered as 321.
b.	**Wind Speed**	Type the wind speed on knots.
c.	**Air Temp**	Type the air temp in tenths of degrees Kelvin. For example, a temperature of 270.9 degrees K is entered as 2709.
d.	**Air Press**	Type the air pressure in millibars. Unlike the ID line pressure, all four digits may be entered for values over 1000.
11.	Repeat step 9 for each additional line of met. AFATDS will use standard atmosphere values for all lines above the last entered.	
12.	To enable an alert, an alert indicating met data validity is becoming suspect:	This is an optional step.
a.	Click the **Enable Alert** button.	A check appears in the box.
b.	Click the **Alert Hours** field and type the number of hours before the end of the valid DTG the alert will appear.	
13.	Click the **Make Current** button.	The met data is stored and placed in use.

FM17. Receive a Computer Meteorological Message.

Conditions: Given an AFATDS workstation that is powered, with AFATDS started, activated, with the current situation displayed and digital communications established, receive a computer meteorological message.

Additional Information: Meteorological messages are received directly from an MMS or distributed by another AFATDS.

FM17: Receive a Computer Meteorological Message			
Step	Station	Action	Result/Explanation
1	Met Station or Higher HQ AFATDS	Transmit the computer-met message to the Btry/Plt FDC AFATDS.	
2.	Btry/Plt AFATDS	Receive the computer-met message.	The MET icon on the AFATDS Current toolbar darkens and the counter increments.
3.	Btry/Plt AFATDS	Click the **MET** icon.	The CM MET Received window displays for review. The AFATDS operator can examine, but not edit, the met message.
a.		Click the **Name** field and type a name for the met message.	
b.		Click the **Make Current** button.	The computer-met message is stored and put into use as the current met. The met message previously stored as current is renamed Previous Current. If met message distribution is established (see procedure FM15 above), the METCM is transmitted to the SPLLs.

Chapter 3. Special Situations

General.
Since individual launchers will now be controlled by AFATDS, attack analysis is performed against the capability of each launcher instead of the entire platoon. The analysis will take in to consideration the launcher status, uploaded rockets, location, range to target, and target type. In addition to this, an individual launcher may be tasked to directly support a specific FSE for ATACMS fire missions or other special situations. Individual launchers will be considered when calculating Schedule of Fires. In addition to determining the launcher's capability to attack the target, the dwell time and mission cycle time will also be considered when selecting a Launcher to be included in the schedule of fires. AFATDS performs special processing when analyzing missiles (ATACMS Block 1 APAM, ATACMS Block 2 APAM, ATACMS BAT, ATACMS PSAM, and EFOGM) for use on a target. Specific processing related to each type of missile is discussed below along with general behavior related to ATACMS analysis.

How to use this chapter. Chapter 3 describes the fire mission processing as it applies to MLRS missions.
Section I, provides special processing capabilities for munitions selection, associated geometry, volume of fire, and target information during processing of select fire missions.
Section II. Describes, in detail, the tasks executed at the Battery/Platoon FDCs to process fire missions for these Special Situations.

Section I. AFATDS Fire Mission Capabilities for Special Situations.

1. ATACMS APAM and HE Missile Processing.
   a. Missile selection. ATACMS APAM and HE munitions selection is essentially the same as for rockets. The following differences apply to this process. (In this discussion, the requestor is the agency from which the mission is received at the MLRS unit. This could be a higher FA headquarters, a sensor or even an FSE.)
      1) If the requestor specifies ATACMS APAM or HE in the request, no other munitions will be examined if that missile does not provide a capable solution.
      2) The dispersal pattern defines the size and density of the of the APAM sub-munitions pattern at the target. If the requestor specifies a dispersal pattern no other pattern will be considered.
   b. Target Segmentation. ATACMS APAM or HE missions are segmented if the target is larger than 2000 x 2000 meters and each additional segment is that size. The aimpoint for each segment is the center of the segment.
   c. PAH, TAH and MFP geometries. PAH, TAH and MFP geoemtries are automatically constructed by AFATDS and transmitted to other AFATDS involved in the mission as well as well as any AFATDS assigned to message distribution for these geometries.
      1) PAH Geometry. The PAH geometry is constructed using the same parameters as for the ATACMS-BAT missile.
      2) TAH Geometry. The Target Air Hazard geometry for the ATACMS-APAM is constructed as described below.
         a) The aimpoint location is computed. A separate point directly below the bursting point of the warhead (airburst point for sub-munitions release) is determined.
         b) A 1000-meter buffer is added before the burst point and after the aimpoint to define the total length of the TAH. The octal width is determined by adding 1000m to each side of a line through the burst point and the aimpoints.
         c) The height of the TAH is determined by the height of burst. This value defaults to 1500m.
      3) MFP Geometry. The missile flight path geometry, a dashed blue line, connects the center of the fire unit location and the aimpoint location within the target. This geometry, when edited, contains the time of flight, the maximum ordinate and the terminal velocity.
2. ATACMS BAT Missile Processing.
   a. Effects and Volume of fire computation. AFATDS can receive a requested volume of fire for determines the number of ATACMS BAT missiles to fire as follows.

1) When volume of fire is specified by the requestor, by the AFATDS operator, or by the Guidances\Rocket-Missile\ Attack Methods, AFATDS computes the effects on the target based on this volume of fire. No target or segment can be assigned more than 2 missiles. If an attempt is made to exceed this limit, the mission is assigned a No Go with a reason of “Too many rounds requested.”
2) When no volume of fire is requested, AFATDS computes the number of missiles to fire based on the effects desired. When effects are received in the fire request these are used, otherwise the effects specified in the Guidances, Target, TMM are used.

b. Target Segmentation. ATACMS ABAT missions may require target segmentation. Segmentation may result from two aspects of target data.
1) Target segmentation based on target size. A target may be segmented based on size. The logic involved is as follows:
a) A target longer than 6000 meters will be segmented until no segment is longer than 6000 meters or, until a maximum of 8 segments are created from the target.
b) A target wider than 5000 meters will be segmented until no segment is wider than 5000 meters or until a maximum of 8 segments are created.
2) Target segmentation based on target strength. In addition to size, the strength or number of elements may require the target to be segmented.
a) If the target strength is greater than 70, the target dimensions (length and width) are segmented. Assuming an equal distribution of elements inside the dimensions does this. The strength is divided until a value less than 70 is achieved. This decides the number of segments that are required. The dimensions are then segmented based on that number or a maximum number of 8 segments.
3) Target Segmentation based on volume of fire. Because no segment may be attacked with more than two missiles, target segmentation may be required based on the volume of fire. Volume of fire segmentation continues until sufficient segments are created to ensure not more than two missiles are fired at each or a maximum of eight segments is created.
4) Example. More than one segmentation method may be applied as required. For example:

3. If a target is segmented by strength into 2 target segments and the requested VOF for the target is 5 rounds, the 5 rounds is initially divided between the 2 target segments resulting in the first segment being assigned 3 rounds and the second segment assigned 2 rounds. Since the first segment has more than 2 rounds assigned, the target is again segmented into 4 target segments, and the five rounds are divided among these segments. This will result in a target with 2 rounds for the first segment and 1 round for the remaining segments.
4. If the target was segmented by VOF and the target segments still have a VOF greater than 2 (e. g, the requested VOF was 9 rounds or greater in this example), the target will not be segmented. An additional time and a No-Go assessment will be set to "Too Many Rounds Requested" for this case.

5. PAH, TAH and MFP geometries.
PAH, TAH and MFP geometries are generated using the following information.
1) The PAH.
a) The Platoon Air Hazard is positioned around the launcher site. A separate PAH is created for each launcher. The XDIST (found in the LMM Manager on AFATDS) is as the radius of a circle around the launch site. The circle defines the platoon operating area, the area within which the launcher could fire without invalidating the PAH.
b) The PAH is constructed around the platoon operating area. The width of the PAH is extended from the Platoon Air Hazard by a factor called ZDIST2. ZDIST2 is applied to both sides of the platoon operating area.
c) Lengthwise, the PAH extends towards the target to a distance that allows the missile trajectory to reach the ZALT height. This height is found in the AFATDS LMM manager window.
d) The height of the PAH is defined by the ZALT distance. These factors create the three-dimensional space of the PAH.

2) Target Air Hazard. The TAH is actually composed of two geometries. These are cylinders around the target aimpoint. The TAH is constructed as follows.
   a) A two Target Air Hazard geometries are created for each target aimpoint. The TAHs are "stacked" with a larger circular TAH at the surface and a smaller TAH above. The lower TAH accommodates area used by the BAT sub-munitions for maneuver to the targets. This TAH is centered on the aimpoint of the segment or target. The radius of this geometry is 9999 meters and extends from the aimpoint altitude to a height of 2600 meters.
   b) The upper TAH provides an area for de-confliction of the missile as it approaches the target area. The upper TAH is centered on the lower TAH. The bottom of the upper TAH is 2600m above the target and rests on the top of the lower TAH. The upper TAH extends 2000m above the lower TAH for a maximum altitude of 4600m. The diameter of the upper TAH is 5000m.

3) Missile Flight Path. The missile flight path geometry, a dashed blue line, connects the center of the fire unit location and the aimpoint location within the target. This geometry, when edited, contains the time of flight, the maximum ordinate and the terminal velocity.

Section II. ATACMS Fire Mission Processing Procedures.

SS1. Manage the LMM.

Conditions: Given an AFATDS workstation that is powered, with AFATDS started and activated, manage the LMM.

Additional Information: Missile munitions computations require data above the effects type data found in JMEMS. AFATDS uses loadable munitions modules to provide effects data, missile flight path information and for input in the construction of PAH and TAH geometries. AFATDS software provides unclassified LMMs for ATACMS-APAM block I, Ia, TACMS-PSAM (HE unitary warhead JEJ missile), and for ATACMS BAT block II. (Other LMMs may be provided on CDROM and are installed using the segment installer application found in the SYSADMIN login. For details on this procedure see the AFATDS Operator's Notebook.)

SS1. Manage LMM.		
Step	Action	
1.	On the Main Menu bar, Click **System\ Administration\LMM Manager.**	The Loadable Munitions Manager window displays. After approximately 60 seconds, the window populates with all loaded LMMs and their states displayed as Active or Inactive.
2.	To activate an inactive LMM:	An LMM that is inactive cannot be accessed by AFATDS to provide mission-processing data.
a.	Click the desired inactive **LMM** in the LMM list.	The LMM name and State highlight and the Activate button displays active.
b.	Click the **Activate** button.	The selected LMM changes State from Inactive to Active.
3.	To define geographical data for ATACMS BAT:	The LMM uses geographically related environmental parameters in computing effects data for BAT submunitions.
a.	Click the **Region**: field and select the desired region.	Selections are European Highland, European Lowland, Northeast Asia and Southwest Asia. The default is European Highland.
4.	To define parameters for constructing the PAH geometry for ATACMS APAM:	

SS1. Manage LMM.		
Step	Action	
a.	Double Click the **XDIST** field and type the desired value.	The XDIST is the radius of a circle that defines the platoon operating area. The SPLL firing the missile is assumed to operate in this area. The default value is 3000m. (See para. 2.c. at the beginning of this chapter for detailed description.)
b.	Double Click the **XALT** field and type the desired value.	The XALT is a height, in meters, above the platoon operating area. The downrange side of the rectangular PAH geometry extends to a distance at which the missile trajectory reaches this altitude. (See para. 5.c. at the beginning of this chapter for detailed description.)
5.	When editing is complete, Click the **OK** button.	The Loadable Munitions Manager window closes.

SS2. Process an ATACMS APAM Mission.

Conditions: Given an AFATDS workstation that is powered, with AFATDS activated and the current situation displayed, process an ATACMS APAM mission.

SS2: Process an ATACMS APAM Mission			
Step	Station	Action	Result/Explanation
1.	Btry/Plt AFATDS	Complete the Initiate Fire Mission window. Click Mission **Processing\Initiate Fire Mission**.	
a.		Click **Method of Control** field and select **At My Command.**	Mission will be sent as a Warning Order, At My Command.
a.		Click the **Location** field and type the target location.	
b.		Click the **Target Category** fields and select the desired target category.	
c.		Click the **Target Type** field and select the desired target type.	
d.		Click the **Munitions** tab.	The window displays munitions related data.
e.		Click the **FFE #1** field and select **ATACMS-APAM.**	
f.		Complete inputs.	See Procedure FM1 for additional, optional inputs.
g.		Click the **Analyze Tgt** button.	
NOTE The method of control for an ATACMS mission defaults to Warning Order. The SPLL receives the mission as an At My Command method of control.			
If intervention is set, the mission is placed in the IP icon of the Current window. The IP icon darkens and becomes selectable. . Go to step 2. If intervention is not set, the mission is processed and the Btry/Plt AFATDS determined solution is executed by sending the appropriate messages to observer and fire unit. Go to step 3.			

SS2: Process an ATACMS APAM Mission			
Step	Station	Action	Result/Explanation
2.	Btry/Plt AFATDS	Display the mission processing solution.	
a.		Click the **IP** icon on the Current window tool bar.	This procedure assumes a capable (green or yellow) option is determined. For a complete description of intervention, see Procedure FM4. Examine the Intervention Windows
b.		Click the **RKT/MSL Soln** tab.	Detailed mission data is displayed.
c.		Click one of the following:	
		Accept Recommendation	If coordination is required: The coordination request: 1. Is transmitted to the Establishing Unit ID (Responsible Unit ID) of the affected geometry. 2. Fails communications if no route exists, the affect unit does not possess a device that can receive a coordination request or comm fails. 3. In all cases, the message is copied to the Coordination icon on the Current window tool bar. This allows access to override the request if voice comm is established. If no coordination was required or coordination approval was received: Transmit the solution displayed in the Recommendation to the SPLL and sends an MTO. The MTO: 4. Is placed in the Active Mission Monitor icon of the Current menu tool bar if the mission was initiated at the AFATDS. 5. Is transmitted to the observer if the mission originated at another station and AFATDS has a comm route to that station, either direct or indirect. 6. Is presented to the AFATDS operator as an alert if no comm route to the requestor exists. Click the Send to Originator button on the alert to send the MTO back through the AFATDS that communicates with the station that originated the mission.
		Send Selected	Transmits the option highlighted in the Attack Options list. MTO and coordination are handled as for Accept Recommendation.
		Recalculate	Displays a copy of the mission's Initiate Fire Mission window to allow changes to be made by editing and reprocessing. Mission is placed in Intervention icon with the new solution when Analyze Tgt button is selected.
		Deny	If the mission was entered at the AFATDS: places a copy of the Deny message in the Active Mission Messages icon of the Current menu tool bar. If the mission originated at another station: transmits a denied MTO to that station.
3.	Btry/Plt AFATDS	Creates **PAH, TAH** and **MFP** geometries.	These geometries are automatically transmitted to other agencies based on data distribution setup.
4.	SPLL	Receives MLRS;CFF	
5.	Btry/Plt AFATDS	**Transmit MTO.**	If the mission was received from another AFATDS and that AFATDS requested ATACMS, the MTO is transmitted to that AFATDS; otherwise the MTO is returned to the your AFATDS in the Active Mission Monitor.

SS2: Process an ATACMS APAM Mission			
Step	Station	Action	Result/Explanation
6.	Btry/Plt AFATDS	Track mission status of SPLLs.	Click the MLRS Weapon Status icon of the Current menu tool bar. The Weapon Status MLRS window displays. See Procedure FM5. Examine the Weapon Status MLRS Window for details of mission tracking on the Weapon Status MLRS window.
If the SPLL denies the mission, go to step 7. If communications with the MLRS fails: see Procedure FM12. React to a Comm Failure During Mission Processing. Otherwise: got to step 8.			
7.	SPLL	Transmits mission denied.	
a.	Btry/Plt AFATDS	Receives EOM.	The mission is placed in the Deny icon for reprocessing and selection of a different SPLL.
b.		Click the **Deny** icon.	The Mission Denied window displays.
c.		Click the **Reprocess** button.	The mission is re-processed. Go to the note before step 2.
8.	SPLL	Transmit “Ready” report.	When the SPLL has moved to the firing point and the LLM has slued to the aiming data, the “Ready” command is automatically transmitted.
a.	Btry/Plt AFATDS	Receive “**Ready**” report.	The ready report queues in the Active Mission Monitor causing the icon to blacken and the count field to increment.
b.	Btry/Plt AFATDS	Click the **Active Mission Monitor**	The Commands window displays.
c.	Btry/Plt AFATDS	Click the **Fire** button.	The Commands window closes.
9.	SPLL	Receives FIRE command.	SPLL fires missile. When the last missile is fired for the mission, the FCS transmits an MLRS MFR message.
10.	Btry/Plt AFATDS	Receives **MFR**.	This action moves the mission record from the Active Target List to the Inactive Target List. The PAH, TAH and MFP for the mission are deleted and the deletion is transmitted to data distribution.

SS3. Process an ATACMS BAT Mission.

Conditions: Given an AFATDS workstation that is powered, with AFATDS activated and the current situation displayed, process an ATACMS BAT mission.

Procedure SS3: Process an ATACMS BAT Mission			
Step	Station	Action	Result/Explanation
1.	Btry/Plt AFATDS	Complete the Initiate Fire Mission window. Click **Mission Processing, Initiate Fire Mission**.	
a.		Click the **Location** field and type the target location.	

<table>
<tr><th colspan="5">Procedure SS3: Process an ATACMS BAT Mission</th></tr>
<tr><th>Step</th><th>Station</th><th>Action</th><th colspan="2">Result/Explanation</th></tr>
<tr><td>b.</td><td></td><td>Click the Target Category fields and select the desired target category.</td><td colspan="2" rowspan="2">The target must be suitable for BAT munitions.
Suitable target types are:
ADA Light,
Artillery Heavy Self Propelled,
Artillery Light Self Propelled,
Artillery Medium Self Propelled,
Armored Personnel Carrier,
Armored Vehicle,
Tank Heavy,
Tank Light,
Tank Medium</td></tr>
<tr><td>c.</td><td></td><td>Click the Target Type field and select the desired target type.</td></tr>
<tr><td rowspan="4">d.</td><td rowspan="2"></td><td rowspan="2">Click Shape and select the appropriate shape and target dimensions.</td><td colspan="2">Default is Point.</td></tr>
<tr><td>Selection:</td><td>Requires:</td></tr>
<tr><td colspan="2">Circular</td><td>Radius in meters.</td></tr>
<tr><td colspan="3" rowspan="2"></td><td>Rectangular</td><td>Length in meters.
Width in meters.
Attitude in meters.</td></tr>
<tr><td>Linear</td><td>Length in meters.
Attitude in meters</td></tr>
<tr><td>e.</td><td></td><td>Click the Strength field and type the number of targets.</td><td colspan="2">Strength greater than 70 targets (e.g., 70 BTRs in a MANEUVER, APC target) causes the target to be segmented.</td></tr>
<tr><td>f.</td><td></td><td>Click the Activity button and select the appropriate entry.</td><td colspan="2">This is an optional entry that should be made if the data is known. Entries are Moving, Stationary and Dugin. Defaults to Stationary.</td></tr>
<tr><td>g.</td><td></td><td>Click the Formation field and select the appropriate entry.</td><td colspan="2">This is an optional entry that should be made if the data is known. Entries are On Road, Off Road and Dispersed. Defaults to On Road.</td></tr>
<tr><td>h.</td><td></td><td>Click the Munitions tab.</td><td colspan="2">The window displays munitions related data.</td></tr>
<tr><td>i.</td><td></td><td>Click the FFE #1 field and select an ATACMS BAT or ATACMS BAT P3 missile.</td><td colspan="2">Number of missiles to fire is computed based on target size and strength.</td></tr>
<tr><td>j.</td><td></td><td>Click the More Tgt Data field.</td><td colspan="2">The window displays additional target inputs.</td></tr>
<tr><td>k.</td><td></td><td>Click the Elements1: field and select specific types.</td><td colspan="2">This is an optional entry that should be made if the data is known.</td></tr>
<tr><td>l.</td><td></td><td>Click the Num: field and type the number of target elements.</td><td colspan="2">This is an optional entry that should be made if the data is known.</td></tr>
<tr><td>m.</td><td></td><td>Complete inputs.</td><td colspan="2">See Procedure FM1 for additional, optional inputs.</td></tr>
<tr><td>o.</td><td></td><td>Click the Analyze Tgt button.</td><td colspan="2"></td></tr>
<tr><td colspan="5">NOTE
The method of control for an ATACMS mission defaults to Warning Order. The SPLL receives the mission as an At My Command method of control.</td></tr>
</table>

Procedure SS3: Process an ATACMS BAT Mission			
Step	Station	Action	Result/Explanation
If intervention is set, the mission is placed in the IP icon of the Current window. The IP icon darkens and becomes selectable. . Go to step 2. If intervention is not set, the mission is processed and the Btry/Plt AFATDS determined solution is executed by sending the appropriate messages to observer and fire unit. Go to step 3.			
2.	Btry/Plt AFATDS	Display the mission processing solution.	
a.		Click the **IP** icon on the AFATDS Current window tool bar.	This procedure assumes a capable (green or yellow) option is determined. For a complete description of intervention, see Procedure FM4. Examine the Intervention Windows.
b.		Click the **RKT/MSL Soln** tab.	Detailed mission data is displayed.
c.		Click one of the following:	
		Accept Recommendation	If coordination is required: The coordination request: 1. Is transmitted to the Establishing Unit ID (Responsible Unit ID) of the affected geometry. 2. Fails communications if no route exists, the affect unit does not possess a device that can receive a coordination request or comm fails. 3. In all cases, copied to the Coordination icon on the Current window tool bar. This allows access to override the request if voice comm is established. If no coordination was required or coordination approval was received transmit the solution displayed in the Recommendation to the SPLLs and transmit the MTO. The MTO: 4. Is placed in the Active Mission Monitor icon of the Current menu tool bar if the mission was initiated at the AFATDS. 5. Is transmitted to the observer if AFATDS has a comm route to that station, either direct or indirect. 6. Is presented to the AFATDS operator as an alert if no comm route to the requestor exists. Click the Send to Originator button on the alert to send the MTO back through the AFATDS that communicates with the observer.
		Send Selected	Transmits the option highlighted in the Attack Options list. MTO and coordination are handled as for Accept Recommendation.
		Recalculate	Displays a copy of the mission's Initiate Fire Mission window to allow changes to be made by editing and reprocessing. Mission is placed in Intervention icon with the new solution when Analyze Tgt button is selected.
		Deny	If the mission was entered at the AFATDS: places a copy of the Deny message in the Active Mission Messages icon of the Current menu tool bar.
3.	Btry/Plt AFATDS	Creates **PAH, TAH** and **MFP** geometries	These geometries are automatically transmitted to other agencies based on data distribution setup.

Procedure SS3: Process an ATACMS BAT Mission			
Step	Station	Action	Result/Explanation
4.	SPLL	Receives MLRS;CFF	
5.	Btry/Plt AFATDS	Transmits MTO.	If the mission was received from another AFATDS and that AFATDS requested ATACMS, the MTO is transmitted to that AFATDS; otherwise the MTO is returned to the your AFATDS in the Active Mission Monitor.
6.	Btry/Plt AFATDS	Track mission status of SPLLs.	Click the MLRS Weapon Status icon of the Current menu tool bar. The Weapon Status MLRS window displays. See Procedure FM5. Examine the Weapon Status MLRS Window for details of mission tracking on the Weapon Status MLRS window.
If the SPLL denies the mission, go to step 7 If communications with the MLRS fails: see Procedure FM12. React to FCS Comm Failure during Mission Processing. Otherwise: got to step 8.			
7.	SPLL	Transmits mission denied.	
a.	Btry/Plt AFATDS	Receives **EOM**.	The mission is placed in the Deny icon for reprocessing and selection of a different SPLL.
8.	SPLL	Transmit “Ready” report.	When the SPLL has moved to the firing point and the LLM has slued to the aiming data, the “Ready” command is automatically transmitted.
a.	Btry/Plt AFATDS	Receive “Ready” report.	The ready report queues in the Active Mission Monitor causing the icon to blacken and the count field to increment.
b.	Btry/Plt AFATDS	Click the **Active Mission Monitor.**	The Commands window displays.
c.	Btry/Plt AFATDS	Click the **Fire** button.	The Commands window closes.
9.	SPLL	Receives **FIRE** command.	SPLL fires missile. When the last missile is fired for the mission, the FCS transmits an MLRS MFR message.
10.	Btry/Plt AFATDS	Receives **MFR**.	This action moves the mission record from the Active Target List to the Inactive Target List. The PAH, TAH and MFP for the mission are deleted and the deletion is transmitted to data distribution.

SS4. Establish Stay-Hot, Shoot Fast Mission Parameters.

Conditions: Given an AFATDS workstation that is powered, with AFATDS activated and the current situation displayed establish Stay-Hot, Shoot Fast mission parameters.

Additional Information: Stay-hot, shoot-fast is a technique designed to provide rapid response to a target located by a sensor such as Firefinder radar. The objective of the technique is to allow long range shooters to be identified and fired upon with minimal delay at either the AFATDS or the SPLL. This procedure provides instructions on establishing the parameters that check the incoming ATI information to filter out and engage the long range shooter targets. Range capability of a Firefinder tracked target is determined at AFATDS by comparing the shooter’s location (location in the ATI) and the impact predict grid from the ATI. SHSF processing is, however, not limited to fire support target types and can be enabled for any target. In these cases the range check is not performed.

SS4. Establish Stay-Hot, Shoot-Fast Mission Parameters.		
Step	Action	

SS4. Establish Stay-Hot, Shoot-Fast Mission Parameters.		
Step	Action	
1.	On the AFATDS Current toolbar, Click **Mission Processing\SHSF**.	The Stay-Hot, Shoot-Fast Processing window displays.
2.	Click the **SHSF Processing Enabled** box in the upper left corner.	A check mark appears. When the window is closed, SHSF processing enables. NOTE: SHSF processing must be re-enabled each time AFATDS is exited and re-started.
3.	Establish filtering of ATI messages to identify SHSF targets:	
a.	Click the **Target Category** field and select the desired target category.	The window displays all targets in the selected category in a spreadsheet.
b.	Double Click the **Tolerance Zone1 (m)** for the desired target and type the Tolerance Zone 1 distance.	The cursor appears in the Tolerance Zone 1 field. This is the distance, in meters from a target assigned to a SPLL that an ATI location may plot and cause the originally assigned mission to be executed against the new target.
c.	Double Click the **Tolerance Zone2 (m)** for the desired target and type the Tolerance Zone 2 distance.	The cursor appears in the Tolerance Zone 2 field. This is the distance, in meters, from a target assigned to a SPLL that an ATI location may plot and cause the originally assigned mission target location to be modified and then executed against the new target.
d.	To cause range of the targeted weapon to be considered, double Click the **Minimum Distance (m)** field and type the range.	This value is the minimum distance between an ATI target location and ATI impact predict location (in the same report) that is acceptable for SHSF engagement. This check applies only to ATI coordinate reports received from Firefinder radar.
e.	Repeat steps 3.a through 3.d for each target type for which SHSF processing will occur.	
5.	When editing is complete, Click the **OK** button.	The Stay-Hot, Shoot-Fast Processing window closes. SHSF processing is enabled for the selected target types.

SS5. Process a Stay-Hot Shoot Fast Mission.

Conditions: Given an AFATDS workstation that is powered, with AFATDS activated and the current situation displayed and SHSF parameters established process a Stay-Hot, Shoot Fast mission.

Additional Information: Stay-hot, shoot-fast mission is processed through the following steps.

SS5: Process a Stay-Hot, Shoot-Fast Mission			
Step	Station	Action	Result/Explanation
1.	Btry/Plt AFATDS	Complete the Initiate Fire Mission window. Click **Mission Processing\Initiate Fire Mission**.	
a.		Click the **Method of Control** and select **At My Command.**	
b		Click the **Location** field and type the target location.	
c		Click the **Target Category fields** and select the desired target category.	**NOTE**: If the sensor locating SHSF targets is a Firefinder, the target established in step 1 must be of a type that the radar sends, i.e., ARTY UNK, RKT/MSLUNK or MORTAR UNK.

SS5: Process a Stay-Hot, Shoot-Fast Mission			
Step	Station	Action	Result/Explanation
d		Click the **Target Type** field and select the desired target type.	
e		Click the **Munitions** tab.	The window displays munitions related data.
f		Click the **FFE#1** field and select an ATACMS missile.	
g		Click the **Analyze Tgt** button.	
NOTE The method of control for an ATACMS mission defaults to Warning Order. The SPLL receives the mission as an At My Command method of control.			
If intervention is set, the mission is placed in the IP icon of the Current window. The IP icon darkens and becomes selectable. . Go to step 2. If intervention is not set, the mission is processed and the Btry/Plt AFATDS determined solution is executed by sending the appropriate messages to observer and fire unit. Go to step 3.			
2.	Btry/Plt AFATDS	Display the mission processing solution.	
a.		Click the **IP** icon on the AFATDS Current window tool bar.	This procedure assumes a capable (green or yellow) option is determined. For a complete description of intervention, see Procedure FM4. Examine the Intervention Windows
b.		Click the **RKT/MSL Soln** tab.	Detailed mission data is displayed.
c.		Click one of the following:	
		Accept Recommendation	If coordination is required: The coordination request: 1. Is transmitted to the Establishing Unit ID (Responsible Unit ID) of the affected geometry. 2. Fails communications if no route exists, the affect unit does not possess a device that can receive a coordination request or comm fails. 3. In all cases, copied to the Coordination icon on the Current window tool bar. This allows access to override the request if voice comm is established. If no coordination was required or coordination approval was received: Transmit the solution displayed in the Recommendation to the SPLLs and sends an MTO. The MTO: 4. Is placed in the Active Mission Monitor icon of the Current menu tool bar if the mission was initiated at the AFATDS. 5. Is transmitted to the observer if AFATDS has a comm route to that station, either direct or indirect. 6. Is presented to the AFATDS operator as an alert if no comm route to the requestor exists. Click the Send to Originator button on the alert to send the MTO back through the AFATDS that communicates with the observer.
		Send Selected	Transmits the option highlighted in the Attack Options list. MTO and coordination are handled as for Accept Recommendation.

SS5: Process a Stay-Hot, Shoot-Fast Mission			
Step	Station	Action	Result/Explanation
		Recalculate	Displays a copy of the mission's Initiate Fire Mission window to allow changes to be made by editing and reprocessing. Mission is placed in Intervention icon with the new solution when Analyze Tgt button is selected.
		Deny	If the mission was entered at the AFATDS: places a copy of the Deny message in the Active Mission Messages icon of the Current menu tool bar.
3.	Btry/Plt AFATDS	Creates **PAH, TAH** and **MFP** geometries	These geometries are automatically transmitted to other agencies based on data distribution setup.
4.	SPLL	Receives MLRS;CFF	
5.	Btry/Plt AFATDS	Receives the MTO in the Active Mission Monitor.	
6.	Btry/Plt AFATDS	Track mission status of SPLLs.	Click the MLRS Weapon Status icon of the Current menu tool bar. The Weapon Status MLRS window displays. See Procedure FM5. Examine the Weapon Status MLRS Window for details of mission tracking on the Weapon Status MLRS window.
If the SPLL denies the mission, go to step 7 If communications with the MLRS fails: see Procedure FM12. React to FCS Comm Failure during Mission Processing. Otherwise: got to step 8.			
7.	SPLL	Transmits mission denied.	
a.	Btry/Plt AFATDS	Receives **EOM**.	The mission is placed in the Deny icon for reprocessing and selection of a different SPLL.
b.		Click the **Deny** icon.	The Mission Denied window displays.
c.		Click the **Reprocess** button.	The mission is re-processed. Go to the note before step 2.
8.	SPLL	Transmit "Ready" report.	
a.	Btry/Plt AFATDS	Receive "**Ready**" report.	The ready report queues in the Active Mission Monitor causing the icon to blacken and the count field to increment.
b.	Btry/Plt AFATDS	Click the **Active Mission Monitor**	The Commands window displays.
c.	Btry/Plt AFATDS	Click the **OK** button.	The Commands window closes. (Normally this message is used to trigger firing. In SHSF missions, firing is triggered automatically. Leaving the Commands available is not advised because this makes it easier to inadvertently fire the mission.)
9.	Sensor	Report ATI to AFATDS	
10.	Btry/Plt AFATDS	Receives **ATI**	AFATDS performs the following: 1. Determines if target type is a SHSF type. 2. If so, checks active missions on the same target type that are at a warning order MOC, with READY reported. 3. If mission is found, checks the target location: a. If target location is within SHSF tolerance 1 distance, the command to fire is transmitted to the SPLL. b. If the target location is outside tolerance 1 but in tolerance 2 distance, the ATI location is sent as an update to the existing mission with the command to fire. c. If the ATI is outside tolerance zone 2, processing stops here.

SS5: Process a Stay-Hot, Shoot-Fast Mission			
Step	Station	Action	Result/Explanation
11.	SPLL	Receives FIRE command.	SPLL fires missile.
12.	SPLL	Transmits an MFR.	
13.	Btry/Plt AFATDS	Receives **MFR**.	This action moves the mission record from the Active Target List to the Inactive Target List. The PAH, TAH and MFP for the mission are deleted and the deletion is transmitted to data distribution.
NOTE If the SHSF mission is never fired and the mission assignment is to be ended: Perform the End of Mission as outlined in Chapter 2, procedure FM11, Steps 1-3. Click **OK**. End of mission is transmitted to the SPLL.			

SS6. Plan an ATACMS APAM or HE Mission Using the Munitions Calculator

Conditions: Given an AFATDS workstation that is powered, with AFATDS started, activated with a database and the current situation, plan an ATACMS APAM Mission using the Munitions Calculator.

Additional Information: The munitions calculator can be used to compare an existing target with existing or planned unit locations and munitions to determine the required volume of fire.

SS6. Plan an ATACMS-APAM using the Munitions Calculator.		
Step	Action	Result/Explanation
1.	On the AFATDS Current toolbar, Click **Mission Calculator** icon.	The Munitions Calculator window displays.
2.	Click the **Target Number**: field and type the target number.	The target number displays in the Target Number field.
3.	Enter the **fire unit** or **number of launchers** to consider:	
a.	Click the **Fire Unit**: field and select the desired fire unit for the calculation.	This is a conditional step. If the fire unit is not entered, go to step 3.b; if the fire unit is entered, go to step 4.
Or		
b.	Click the **Weapon Type** field and select Rocket/Missile.	This field automatically populates if the fire unit was selected.
c.	Click the **Tubes** field and type the number of launchers to be considered in the calculation.	This field automatically populates if the fire unit was selected.
4.	Click the **Shell**: field and select **ATACMS APAM**.	Target type must agree with the Shell selected.
5.	Click the **Next** button.	The Conventional Munitions window displays.
If the Fire Unit was not entered in step 3.a., go to step 6, otherwise, go to step 7.		
6.	Click the **Firing Point** field and type the grid of the firing point that will be used to engage the target,	
7.	Click the **Munitions Model** field and select the desired ATACMS nomenclature.	
8.	Click the **Effects Desired**: field and select the desired effects level.	Selections are Destroy, Neutralize, Suppress and Specified %. If Specified % is selected, the desired percentage of effects must be entered.

SS6. Plan an ATACMS-APAM using the Munitions Calculator.		
Step	Action	Result/Explanation
9.	Click the **Calculate Qty** field.	The window populates with the following data. One set of data is displayed for each target segment.
	Rounds	The number of rockets that must be fired to achieve the desired effects.
	Expected Coverage	Total predicated effects.
Operator Options: At this stage the operator may: Cancel the window. Go to Step 10. Re-compute by editing the inputs on the window and selecting the Calculate Qty button. Go to Step 6. Calculate the PAH, TAH and MFP, go to step 11.		
10.	Click the **Cancel** button.	The Mission Calculator window displays.
a.	Click the **Cancel** button.	The Mission Calculator window closes.
11.	Click the **PAH/TAH** button.	The PAH, TAH and MFP geometries are created. The Time of Flight field populates, the Store button becomes active.
NOTE Munitions selected must be compatible with target type in order for the PAH, TAH, and MFP geometries to be created**.**		
12.	Click the **Store** button.	All associated windows close. The PAH/TAH/MFP geometries store and the target and segments (if any) store in the planned target list.

SS7. Plan an ATACMS BAT Mission using the Munitions Calculator

Conditions: Given an AFATDS workstation that is powered, with AFATDS started, activated with a database and the current situation, plan a Missile Mission using the Munitions Calculator.

Additional Information: The munitions calculator can be used to compare an existing target with existing or planned unit locations and munitions. When the calculator is used to process a missile mission, the effectiveness of the missile is predicted and the PAH, TAH and MFP geometries are created. Essentially, the same processing occurs as would had the mission been processed.

SS7. Plan an ATACMS BAT Mission using the Munitions Calculator		
Step	Action	Result/Explanation
1.	On the AFATDS Current toolbar, Click **Mission Calculator** icon.	The Munitions Calculator window displays.
2.	Click the **Target Number**: field and type the target number.	The target number displays in the Target Number field.
3.	Click the **Weapon Type** field and select Rocket/Missile.	The Weapon Type field displays Rocket/Missile; all target data fields populate with data.
4.	Click the **Shell**: field and select an ATACMS BAT missile type.	
5.	Click the **Next** button.	The Army TACMS BAT/BAT-P3 Munitions window displays. Strength, Target Activity, Target Formation, Countermeasures and Elements fields are populated based on the stored target data.
NOTE AFATDS uses the strength or total target elements (as well as target dimensions) to determine the need for target segmentation. If the two values disagree, the greater value is used.		
6.	Click the **Effects Desired**: field and select the desired effects level.	Selections are Destroy, Neutralize, Suppress and Specified %. If Specified % is selected, the desired percentage of effects must be entered.

SS7. Plan an ATACMS BAT Mission using the Munitions Calculator		
Step	Action	Result/Explanation
7.	Click the **Calculate Qty** field.	The window populates with the following data. One set of data is displayed for each target segment.
	Target Number	Blank at this stage.
	Fire Unit/Firing Point	Blank at this stage.
	Exp Cov	Total predicted effects.
	Total Qty	Number of missiles to be fired at this target segment.
	Go Status	Status of the mission as Go (capable option) or No Go (incapable of engaging).
	Time of Flight	Blank at this stage.
	No Go Reasons	Displaces reason(s) if the Go/NoGo Status is No Go.
8.	Enter firing point or fire unit location for each segment:	If a firing location is provided, AFATDS computes the data for the target or segments.
a.	Click the button in the **Fire Unit/Firing Point** column and select a fire unit ID.	The name of the fire unit is displayed.
	Or	
b.	Click in one of the fields in the Fire **Unit/Firing Point** column and type a firing point location.	This location is not required to correlate to any unit or point location in the AFATDS current situation.
9.	Click the **Calculate PAH/TAH** button.	The PAH, TAH and MFP geometries are created in blue to distinguish from active mission (with red PAH and TAH). The Target Number and Time of Flight fields populate for each segment. The Store button becomes active.
Operator Options: At this stage the operator may: Cancel the windows, deleting the planned PAH, TAH and MFP. Go to Step 10. Re-compute by editing the inputs on the window and selecting the Calculate Qty button. Go to Step 6. Store the data, go to step 11.		
10.	Click the **Cancel** button.	The Mission Calculator window displays.
a.	Click the **Cancel** button.	The Mission Calculator window closes.
11.	Click the **Store** button.	All associated windows close. The PAH/TAH/MFP geometries store and the target and segments (if any) store in the planned target list.

SS8. Plan a Rocket Mission using the Munitions Calculator

Conditions: Given an AFATDS workstation that is powered, with AFATDS started, activated with a database and the current situation, plan a Rocket Mission using the Munitions Calculator.

Additional Information: The munitions calculator can be used to compare an existing target with existing or planned unit locations and munitions to determine the required volume of fire.

SS8. Plan a Missile Mission using the Munitions Calculator.		
Step	Action	Result/Explanation
1.	On the AFATDS Current toolbar, Click **Mission Calculator** icon.	The Munitions Calculator window displays.
2.	Click the **Target Number**: field and type the target number.	The target number displays in the Target Number field.
3.	Enter the **fire unit** or **number of launchers** to consider:	

SS8. Plan a Missile Mission using the Munitions Calculator.		
Step	Action	Result/Explanation
a.	Click the **Fire Unit**: field and select the desired fire unit for the calculation.	This is a conditional step. If the fire unit is not entered, go to step 3.b; if the fire unit is entered, go to step 4.
	Or	
b.	Click the **Weapon Type** field and select Rocket/Missile.	This field automatically populates if the fire unit was selected.
c.	Click the **Tubes** field and type the number of launchers to be considered in the calculation.	This field automatically populates if the fire unit was selected.
4.	Click the **Shell**: field and select an MLRS Rocket type.	
5.	Click the Next button.	The Conventional Munitions window displays.
6.	Click the **Effects Desired**: field and select the desired effects level.	Selections are Destroy, Neutralize, Suppress and Specified %. If Specified % is selected, the desired percentage of effects must be entered.
7.	Click the **Calculate Qty** field.	The window populates with the following data. One set of data is displayed for each target segment.
	Rounds	The number of rockets that must be fired to achieve the desired effects.
	Expected Coverage	Total predicated effects.
Operator Options: At this stage the operator may: Cancel the window. Go to Step 10. Re-compute by editing the inputs on the window and selecting the Calculate Qty button. Go to Step 6. Store the data, go to step 11.		
10.	Click the **Cancel** button.	The Mission Calculator window displays.
a.	Click the **Cancel** button.	The Mission Calculator window closes.
11.	Click the **Store** button.	

Section II. Mission Management.

SS9. Process Moving Target Mission

Conditions: Given an AFATDS workstation that is powered, with AFATDS activated and the current situation displayed, process a moving target mission.

SS9: Process a Moving Target Mission			
Step	Station	Action	Result/Explanation
1.	Btry/Plt AFATDS	Complete the Initiate Fire Mission window. Click Mission **Processing\Initiate Fire Mission**.	
a.		Click the **Location** field and type the target location.	
b.		Click the **Target Category** fields and select the desired target category.	
c.		Click the **Target Type** field and select the desired target type.	
d.		Click the **More Tgt Data** tab.	The window displays additional target inputs.
e.		Click the **Moving Target Speed (kph):** field and type the target's speed.	Speed is entered in kilometers per hour.
f.		Click the **Direction (mils):** field and type the direction the target is traveling.	
g.		Click the **Time**: field and type the time the target was spotted.	Time is entered in the form DDHHHHZMMMYY where DD is the day, HHHH is the Z is the time zone, MMM is the month and YY is the year.
h.		Complete additional, optional entries.	See Procedure FM1 for additional, optional inputs.
i.		Click the **Analyze Tgt** button.	
NOTE The method of control defaults to Time on Target			
If intervention is set, the mission is placed in the IP icon of the Current window. The IP icon darkens and becomes selectable. Go to step 2. If intervention is not set, the mission is processed and the Btry/Plt AFATDS determined solution is executed by sending the appropriate messages to observer and fire unit. Go to step 3.			
2.	Btry/Plt AFATDS	Display the mission processing solution.	
a.		Click the **IP** icon on the Current window tool bar.	This procedure assumes a capable (green or yellow) option is determined. For a complete description of intervention, see Procedure FM4. Examine the Intervention Windows
b.		Click the **RKT/MSL Soln** tab.	Detailed mission data is displayed.

SS9: Process a Moving Target Mission			
Step	Station	Action	Result/Explanation
c.		Click one of the following:	
		Accept Recommendation	If coordination is required: The coordination request: 1. Is transmitted to the Establishing Unit ID (Responsible Unit ID) of the affected geometry. 2. Fails communications if no route exists, the affect unit does not possess a device that can receive a coordination request or comm fails. 3. In all cases, copied to the Coordination icon on the Current window tool bar. This allows access to override the request if voice comm is established. If no coordination was required or coordination approval was received: Transmits the solution displayed in the Recommendation to the SPLLs and sends an MTO. The MTO: 4. Is placed in the Active Mission Monitor icon of the Current menu tool bar if the mission was initiated at the AFATDS. 5. Is transmitted to the observer if AFATDS has a comm route to that station, either direct or indirect. 6. Is presented to the AFATDS operator as an alert if no comm route to the requestor exists. Click the Send to Originator button on the alert to send the MTO back through the AFATDS that communicates with the observer.
		Send Selected	Transmits the option highlighted in the Attack Options list. MTO and coordination are handled as for Accept Recommendation.
		Recalculate	Displays a copy of the mission's Initiate Fire Mission window to allow changes to be made by editing and reprocessing. Mission is placed in Intervention icon with the new solution when Analyze Tgt button is selected.
		Deny	If the mission was entered at the AFATDS, places a copy of the Deny message in the Active Mission Messages icon of the AFATDS Current menu tool bar.
3.	Btry/Plt AFATDS	Creates **PAH, TAH** and **MFP** geometries.	These geometries are automatically transmitted to other agencies based on data distribution setup.
4.	SPLL	Receives MLRS;CFF	
5.	Btry/Plt AFATDS	Transmits **MTO**.	If the mission was received from another AFATDS and that AFATDS requested ATACMS, the MTO is transmitted to that AFATDS; otherwise the MTO is returned to the your AFATDS in the Active Mission Monitor.
6.	Btry/Plt AFATDS	Track mission status of SPLLs.	Click the MLRS Weapon Status icon of the Current menu tool bar. The Weapon Status MLRS window displays. See Procedure FM5. Examine the Weapon Status MLRS Window for details of mission tracking on the Weapon Status MLRS window.
If the SPLL denies the mission, go to step 7. If communications with the MLRS fails: see Procedure FM12. React to FCS Comm Failure during Mission Processing.			
7.	SPLL	Transmits mission denied.	

SS9: Process a Moving Target Mission			
Step	Station	Action	Result/Explanation
a.	Btry/Plt AFATDS	Receives **EOM**.	The mission is placed in the Deny icon for reprocessing and selection of a different SPLL.
b.	Btry/Plt AFATDS	Mission is placed in the **Deny** icon on the AFATDS Current toolbar.	See Procedure FM8. React to a Denied Fire Mission.
8.	SPLL	Fire the mission.	The FCS prompts the operator to arm and fire based on the TOT time. An MLRS MFR is transmitted to AFATDS when the mission is ended.
9.	Btry/Plt AFATDS	Receives the **MLRS MFR.**	AFATDS performs the following: a. Moves the target from the Active to the Inactive Target List. b. Updates the SPLL's uploaded ammunition.

SS10. Amend a Fire Mission in Progress.

Conditions: Given an AFATDS workstation that is powered, with AFATDS activated and the current situation displayed, amend a fire mission in process.

Additional Information: When a target location and/or altitude is changed by the operator editing the location or the reception of updated target data, AFATDS will automatically correct the location and target aimpoint locations of an active fire mission on that target. The active mission must possess a method of control of Warning Order.

SS10: Amend a Fire Mission in Progress			
Step	Station	Action	Result/Explanation
1	Requestor	Composes and transmits call for fire.	The requestor may be a human or sensor device. The call for fire may be transmitted to an FSE/FSCC or FA CP AFATDS. That AFATDS may then transmit a fire order to the battery/platoon AFATDS.
If the mission is received via data communications, go to step 3.			
2.	Btry/Plt AFATDS	Complete the Initiate Fire Mission window. Click **Mission Processing\Initiate Fire Mission**.	
a.		Click the **Method of Control** and select Warning Order.	
b.		Click the **Location** field and type the target location.	
c.		Click the **Target Category** fields and select the desired target category.	
d.		Click the **Target Type** field and select the desired target type.	
e.		Complete additional, optional entries.	See Procedure FM1 for additional, optional inputs.
f.		Click the **Analyze Tgt** button.	

SS10: Amend a Fire Mission in Progress			
Step	Station	Action	Result/Explanation
If intervention is set, the mission is placed in the IP icon of the Current window. The IP icon darkens and becomes selectable. . Go to step 3. If intervention is not set, the mission is processed and the Btry/Plt AFATDS determined solution is executed by sending the appropriate messages to observer and fire unit. Go to step 4.			
3.	Btry/Plt AFATDS	Display the mission processing solution.	
a.		Click the **IP** icon on the AFATDS Current menu tool bar.	This procedure assumes a capable (green or yellow) option is determined. For a complete description of intervention, see Procedure FM4. Examine the Intervention Windows.
b.		Click the **RKT/MSL Soln** tab.	Detailed mission data is displayed.
c.		Click one of the following:	
		Accept Recommendation	If coordination is required: The coordination request: 1. Is transmitted to the Establishing Unit ID (Responsible Unit ID) of the affected geometry. 2. Fails communications if no route exists, the affect unit does not possess a device that can receive a coordination request or comm fails. 3. In all cases, copied to the Coordination icon on the Current window tool bar. This allows access to override the request if voice comm is established. If no coordination was required or coordination approval was received: Transmits the solution displayed in the Recommendation to the SPLLs and sends an MTO. The MTO: 4. Is placed in the Active Mission Monitor icon of the Current menu tool bar if the mission was initiated at the AFATDS. 5. Is transmitted to the observer if AFATDS has a comm route to that station, either direct or indirect. 6. Is presented to the AFATDS operator as an alert if no comm route to the requestor exists. Click the Send to Originator button on the alert to send the MTO back through the AFATDS that communicates with the observer.
		Send Selected	Transmits the option highlighted in the Attack Options list. MTO and coordination are handled as for Accept Recommendation.
4.	SPLL	Receives MLRS;CFF	
5.	Requestor	Receives and stored the MTO.	
NOTE The SPLL transmits a WILCO when the mission is processed. This message is acknowledged by AFATDS but not displayed to the operator as a message but updates the FCS Weapon Status window Launcher Response column.			
6.	Btry/Plt AFATDS	Track mission status of SPLLs.	Click the MLRS Weapon Status icon of the Current menu tool bar. The Weapon Status MLRS window displays. See Procedure FM5. Examine the Weapon Status MLRS Window for details of mission tracking on the Weapon Status MLRS window.

SS10: Amend a Fire Mission in Progress			
Step	Station	Action	Result/Explanation
7.	Btry/Plt AFATDS	Amend the mission.	
a.		With the AFATDS Current toolbar active, Click the **Target** icon.	The Active Target List displays.
b.		Click the **target data** to the right of the target number.	The target data is highlighted.
c.		Click **Target\Edit.**	The Basic Target Information window displays. The location, altitude and MOC may be edited.
d.		Click the **OK** button.	The amended fire order is automatically transmitted.
8.	SPLL	Receive amendment to CFF.	The FCS indicates call for fire data has been received. The operator acknowledges the alarm with AMENDED TARGET DATA and the target number.
a.		Transmits WILCO	
9.	Btry/Plt AFATDS	Receives **WILCO**.	AFATDS will not alert the operator of the new WILCO. However, the Status window for the mission displays Commands received.

SS11. Cancel a Fire Mission in Progress.

Conditions: Given an AFATDS workstation that is powered, with AFATDS activated and the current situation displayed, amend a fire mission in progress.

SS11: Cancel a Fire Mission in Progress			
Step	Station	Action	Result/Explanation
1	Requestor	Composes and transmits call for fire.	The requestor may be a human or sensor device. The call for fire may be transmitted to an FSE/FSCC or FA CP AFATDS. That AFATDS may then transmit a fire order to the battery/platoon AFATDS.
If the mission is received via data communications, go to step 3.			
2.	Btry/Plt AFATDS	Complete the Initiate Fire Mission window. Click **Mission Processing\Initiate Fire Mission**.	
a.		Complete additional, optional entries.	See Procedure FM1 for additional, optional inputs.
b.		Click the **Analyze Tgt** button.	
If intervention is set, the mission is placed in the IP icon of the Current window. The IP icon darkens and becomes selectable. . Go to step 3. If intervention is not set, the mission is processed and the Btry/Plt AFATDS determined solution is executed by sending the appropriate messages to observer and fire unit. Go to step 4.			
3.	Btry/Plt AFATDS	Display the mission processing solution.	
a.		Click the **IP** icon on the AFATDS Current tool bar.	This procedure assumes a capable (green or yellow) option is determined. For a complete description of intervention, see Procedure FM4. Examine the Intervention Windows.
b.		Click the **RKT/MSL Soln** tab.	Detailed mission data is displayed.

SS11: Cancel a Fire Mission in Progress			
Step	Station	Action	Result/Explanation
c.		Click one of the following:	
		Accept Recommendation	If coordination is required: The coordination request: 1. Is transmitted to the Establishing Unit ID (Responsible Unit ID) of the affected geometry. 2. Fails communications if no route exists, the affect unit does not possess a device that can receive a coordination request or comm fails. 3. In all cases, copied to the Coordination icon on the Current window tool bar. This allows access to override the request if voice comm is established. If no coordination was required or coordination approval was received: Transmits the solution displayed in the Recommendation to the SPLLs and sends an MTO. The MTO: 4. Is placed in the Active Mission Monitor icon of the Current menu tool bar if the mission was initiated at the AFATDS. 5. Is transmitted to the observer if AFATDS has a comm route to that station, either direct or indirect. 6. Is presented to the AFATDS operator as an alert if no comm route to the requestor exists. Click the Send to Originator button on the alert to send the MTO back through the AFATDS that communicates with the observer.
		Send Selected	Transmits the option highlighted in the Attack Options list. MTO and coordination are handled as for Accept Recommendation.
4.	SPLL	Receives MLRS;CFF	
5.	Requestor	Receives and stored the MTO.	
NOTE The SPLL transmits a WILCO when the mission is processed. This message is acknowledged by AFATDS but not displayed to the operator as a message but updates the FCS Weapon Status window Launcher Response column.			
6.	Btry/Plt AFATDS	Track mission status of SPLLs.	Click the MLRS Weapon Status icon of the AFATDS Current tool bar. The Weapon Status MLRS window displays. See Procedure FM5. Examine the Weapon Status MLRS Window for details of mission tracking on the Weapon Status MLRS window.
7.	Btry/Plt AFATDS	Cancel the mission.	
a.		With the AFATDS Current toolbar active, Click **Target** icon.	The Active Target List displays.
b.		Click the **target data** to the right of the target number.	The target data is highlighted.
c.		Click **Target\Target Actions\End Of Mission.**	The End of Mission window displays.
d.		Click the **OK** button.	The cancel fire order is automatically transmitted.

SS11: Cancel a Fire Mission in Progress			
Step	Station	Action	Result/Explanation
8.	SPLL	Receive Cancel CFF.	The FCS indicates call for fire data has been received. The operator acknowledges the alarm, CANCEL TARGET and the target number.
a.		Transmits WILCO	
9.	Btry/Plt AFATDS	Receives WILCO.	AFATDS receives the WILCO as a free-text message through the CMP mailbox.

SS12. Assign a Posture to a BTRY, POC or SPLL.

Conditions: Given an AFATDS workstation that is powered, with AFATDS activated and the current situation displayed, assign a posture to a battery, POC or SPLL.

Additional Information: Units may be postured to enhance mission response times and assist in ammunition management. See Chapter 2, Section I, paragraph 10 for a description of posture processing.

SS12: Assign a Posture to a BTRY, POC or SPLL			
Step	Station	Action	Result/Explanation
1	Btry/Plt AFATDS	Locate the unit symbol on the map.	This is the unit to which the posture will be assigned.
a.		On the AFATDS Current toolbar, Click **Map\Find** Symbol.	The Find Symbol window displays.
b.		Click the **Friendly Units** button.	The window displays a list of friendly units displayed on all overlays in the Current window.
c.		Click the **Unit ID** in the Friendly Units list.	The Unit ID highlights and the On Overlay list displays the overlays on which the unit may be found.
d.		Click an **overlay name** in the On Overlay list.	The overlay name highlights.
e.		Click the **OK** button.	The AFATDS Current tab map centers on the selected unit.
2.	Btry/Plt AFATDS	Create the Posture	
a.		Click the **unit symbol** on the map.	The unit symbol displays as a white line form with no color.
b.		**Right** Click on the unit symbol.	A pop-up menu displays.
c.		Click **Posture**.	The Select Posture window displays.
d.		Click the **New** button.	The Unit Posture window displays.
To create a posture assigning a location, go to step 2.e, or To create a posture assigning an On-Call Target, go to step 2f.			
e.		Click the **Location** field and enter location to support.	
f.		Click the **On-Call Target Number** field and Click Select…	The Select On-Call Target window displays.
1)		Click the **target number** and the **OK** button.	

SS12: Assign a Posture to a BTRY, POC or SPLL			
Step	Station	Action	Result/Explanation
g.		Click the **Azimuth of Lay** field and type the azimuth the unit must support.	
h.		Click the **From DTG** and type the effective time of the posture.	
i.		Click the **To DTG** and type the expiration time of the posture.	
j.		Click the appropriate **Munitions Model** and type the quantity of munitions in the appropriate response time fields.	Munitions models are listed by type, with response times of 0-2, 2-5, 5-20 and 20+ minutes.
To transmit the posture, go to step 3. To store the posture, go to step 4.			
3.		Click the **Send**… button.	The Send To window displays.
a.		Click the **unit ID** or **distribution list** to transmit to.	The unit or list name highlights. Note: Postures cannot be transmitted to the FCS.
b.		Click the **OK** button.	The Send To window closes and the posture is transmitted.
4.		Click the **OK** button.	The Unit Posture window closes and the posture is stored.

Section III. Target Lists and Fire Planning

SS13. Create a Target List.

Conditions: Given an AFATDS workstation that is powered, with AFATDS started, activated, and with the current situation displayed Create a target list.

SS13: Create a Target List		
Step	Action	Result/Explanation
1.	Click **Targets\Workspace\Current\ List\New Target List**.	The Target List window displays.
2.	Click the **Target List**: field and type a unique name for the target list.	1 to 30 characters, blanks spaces and special characters may be used.
NOTE The Target List window may be stored by selecting CREATE and without adding targets to the list. AFATDS will store a blank target list. To enter a new target on the list: Go to step 3. To copy an existing target list into the new list Go to step 4. To copy selected targets from an existing list into the new list Go to step 5.		
3.	Click **Target\New**.	The Basic Target Information window displays.
a.	Click the **Target Number** field and type the target number.	If no target number is entered, the next available target number from the AFATDS target number block is assigned when the target is stored.

<table>
<tr><th colspan="4">SS13: Create a Target List</th></tr>
<tr><th>Step</th><th>Action</th><th colspan="2">Result/Explanation</th></tr>
<tr><td>b.</td><td>Click the Location fields and type the target grid.</td><td colspan="2">Location can be copied and pasted from the map by:
-Pointing the cursor at the location on the map
-Pressing and holding the Control key and right Clicking the track ball button
-Pointing the cursor at the Location field
--Pressing and holding the Control key and middle Clicking the track ball button.</td></tr>
<tr><td>c.</td><td>Select Category</td><td colspan="2">13 target categories are available. Selection defines choices of Type. Default is LOC.</td></tr>
<tr><td>d.</td><td>Select Type</td><td colspan="2">Allows selection of specific target type. Default is Terrain.</td></tr>
<tr><td rowspan="5">e.</td><td rowspan="5">Select Shape.</td><td colspan="2">Default is Point.</td></tr>
<tr><td>Selection:</td><td>Requires:</td></tr>
<tr><td>Circular</td><td>Radius in meters.</td></tr>
<tr><td>Rectangular</td><td>Length n meters.
Width in meters.
Attitude in meters.</td></tr>
<tr><td>Linear</td><td>Length in meters.
Attitude in meters</td></tr>
<tr><td>f.</td><td>Click OK.</td><td colspan="2">The Basic Target Information window closes and the target data is displayed on the Menu Tree under the Current List window. To add additional targets, go to the note after step 2; if editing is complete, go to step 6.</td></tr>
<tr><td>4.</td><td>Copy targets into New Target List.</td><td colspan="2"></td></tr>
<tr><td>a.</td><td>Click the name of the desired list to be copied to in Current List folder of the Menu Tree.</td><td colspan="2">The name highlights.</td></tr>
<tr><td>b.</td><td>Click the Right button on the Trackball and select Open.</td><td colspan="2">The folder opens and displays the Targets in the list on the Target List window.</td></tr>
<tr><td>c</td><td>Click the name of the desired list to be copied from in the Current List folder of the Menu Tree.</td><td colspan="2">The name highlights.</td></tr>
<tr><td>d.</td><td>Click those target numbers that are to be added to the new list.</td><td colspan="2">The target numbers highlight.</td></tr>
<tr><td>e.</td><td>Click the Right button on the Trackball and select Copy to List.</td><td colspan="2">The selected targets are added to the new target list. To add additional targets, go to the note after step 2; if editing is complete, go to step 6.</td></tr>
<tr><td>5.</td><td>Click the name of the copied to target list.</td><td colspan="2">Review list to ensure all selected targets are copied.</td></tr>
<tr><td>6.</td><td>Click OK.</td><td colspan="2">The Target List window closes and the target list is stored.</td></tr>
<tr><td colspan="4">To access the list again: Click Targets\Current, select the list name and Double Click.</td></tr>
</table>

SS14. Create a Group.

Conditions: Given an AFATDS workstation that is powered, with AFATDS started, activated and with the current situation displayed Create a Group.

Additional Information: A group is a number of targets that are attacked simultaneously during the execution of a fire plan. After constructing the group, the group must be added to a fire plan (see procedure SS16 below).

SS14. Create a Group		
Step	Action	Result/Explanation
1.	On the AFATDS Current toolbar, Click **Targets\Groups\New**	The Group window displays.
2.	Type a unique name for the plan in the **Group** field.	1 to 30 characters, blanks spaces and special characters may be used.
3.	Add targets to the group.	Targets may be added in the following manner.
NOTE Adding targets to a group also adds the same targets to the On Call Target List making them available for quick fire requests.		
a.	Add from existing lists.	Perform the following:
1)	In the **List Type**, Click **Target Lists.**	Target Lists highlights.
2)	Click the **Open** button.	The heading List Type changes to Target Lists and the list displays stored target list name.
3)	Click the **list** from which targets will be copied.	The list name highlights.
4)	To copy an entire list to the plan, do not open target lists Click the **Copy** arrow.	All targets in the list appear in the Target Number pane on the left.
5)	To copy **individual** targets from the list to the plan, Click the **Open** button.	The target list opens to display individual targets in the list.
6)	Click on **targets** to be added to the plan.	The targets highlight.
7)	Click the **Copy** arrow.	Selected targets in the list appear in the Target Number pane on the left.
b.	Add from existing groups.	Perform the following:
1)	In the List Type, Click **Groups**	Groups highlights.
2)	Click the **Open** button.	The heading List Type changes to Groups and the list displays stored group names.
3)	Click the **Group** from which targets will be copied.	The name highlights.
4)	To copy an entire Group to the plan, do not open lists Click the **Copy** arrow.	All targets in the group appear in the Target Number pane on the left.
5)	To copy individual **targets** from the group to the plan, Click the **Open** button.	The group opens to display individual targets in the list.
6)	Click on **targets** to be added to the plan.	The targets highlight.
7)	Click the **Copy** arrow.	Selected targets in the group appear in the Target Number pane on the left.
c.	Add targets from the map.	Perform the following:

SS14. Create a Group		
Step	Action	Result/Explanation
1)	Click the desired **target** symbol on the Current window.	The symbol is displayed in white.
2)	On the Group window, Click **Target\ Add From Map**.	The selected target is added in the Target Number pane on the left.
4.	Click **OK**.	The Group window closes.
To access the stored group: Click **Targets\Groups** Click on the desired group name and **Double Click**.		

SS15. Create a Series.

Conditions: Given an AFATDS workstation that is powered, with AFATDS started, activated and with the current situation displayed Create a Series.

Additional Information: A series is a sequential firing of targets based on a time line. The series is incorporated into a fire plan (see Procedure SS16 below).

SS15. Create a Series		
Step	Action	Result/Explanation
1.	On the AFATDS Current toolbar, Click **Targets\Series\New**	The Series window displays.
2.	Type a unique **name** for the plan in the **Series** field.	1 to 30 characters, blanks spaces and special characters may be used.
3.	Add targets to the Series.	Targets may be added in the following manner.
NOTE Adding targets to a series also adds the same targets to the On Call Target List making them available for quick fire requests.		
a.	Add from existing series	Perform the following:
1)	In the List Type, Click **Series**	Series highlights.
2)	Click the **Open** button.	The heading List Type changes to Series and the list displays stored series names.
3)	Click the **Series** from which targets will be copied.	The name highlights.
4)	To copy an entire series to the plan, do not open lists Click the **Copy** arrow.	All targets in the series appear in the Target Number pane on the left.
5)	To copy **individual** targets from the series to the plan, Click the **Open** button.	The series opens to display individual targets in the list.
6)	Click on **targets** to be added to the plan.	The targets highlight.
7)	Click the **Copy** arrow.	Selected targets in the series appear in the Target Number pane on the left.
b.	Add from existing lists.	Perform the following:
1)	In the List Type, Click **Target** Lists	Target Lists highlights.
2)	Click the **Open** button.	The heading List Type changes to Target Lists and the list displays stored target list name.
3)	Click the **list** from which targets will be copied.	The list name highlights.
4)	To copy an entire list to the plan, do not open lists Click the **Copy** arrow.	All targets in the list appear in the Target Number pane on the left.

SS15. Create a Series		
Step	Action	Result/Explanation
5)	To copy **individual** targets from the list to the plan, Click the **Open** button.	The target list opens to display individual targets in the list.
6)	Click on **targets** to be added to the plan.	The targets highlight.
7)	Click the **Copy** arrow.	Selected targets in the list appear in the Target Number pane on the left.
c.	Add from existing groups.	Perform the following:
1)	In the List Type, Click **Groups**	Groups highlights.
2)	Click the **Open** button.	The heading List Type changes to Groups and the list displays stored group names.
3)	Click the **Group** from which targets will be copied.	The name highlights.
4)	To copy an entire Group to the plan, do not open lists Click the **Copy** arrow.	All targets in the group appear in the Target Number pane on the left.
5)	To copy individual targets from the group to the plan, Click the **Open** button.	The group opens to display individual targets in the list.
6)	Click on **targets** to be added to the plan.	The targets highlight.
7)	Click the **Copy** arrow.	Selected targets in the group appear in the Target Number pane on the left.
d.	Add targets from the map.	Perform the following:
1)	Click the desired **target** symbol on the Current window.	The symbol is displayed in white.
2)	On the Series window, Click **Target\Add From Map**.	The selected target is added in the Target Number pane on the left.
4.	Establish the sequence for attack of the targets.	
a.	Click the **Offset** field for a target.	The target number and type are surrounded by a blue box.
b.	Type the **offset time**.	The time is the number of minutes after the execution of the plan that this target will be fired.
5.	Click **OK**.	The Series window closes.
To access the stored series: Click **Targets\Series,** Click on the **desired** group name and **Double Click**.		

SS16. Create a Fire Plan.

Conditions: Given an AFATDS workstation that is powered, with AFATDS started, activated and with the current situation displayed Create a Fire Plan.

Additional Information: AFATDS allows the creation and transmission of fire plans in the current situation. These plans are normally received from higher or supported headquarters but can be constructed at the MLRS unit. The following key points are important:

1. The fire plan can combine targets, series and groups.
2. The fire plan can be assigned a start time (effectively, H-hour for the plan) or the plan can be assigned "on-call." It should be noted that the plan is not automatically triggered at the start time.
3. The fire plan is executed from the fire plan window, the missions assigned are to be fired as time-on-target missions.

4. When the plan is executed, the targets' offset times are compared to the current time to determine the TOT time. When scheduling the targets' offset time, enough time should be allowed to provide for reaction. For example, if a fire plan was executed at 1200 and the first targets' offset times was +1, the TOT for that target is set at 1201. The first targets' offset time must provide sufficient reaction time to avoid TOT times that cannot be achieved.

SS16: Create a Fire Plan		
Step	Action	Result/Explanation
1.	On the AFATDS Current toolbar, Click **Targets\Fire Plans\New**	
2.	Type a unique name for the plan in the **Fire Plan** field.	1 to 30 characters, blanks spaces and special characters may be used.
3.	Select **On-Call** or **Absolute**	Establishes timing of plan execution.
4.	Type **Start Time**	For On-Call plans this entry establishes the number of minutes after the plan is executed that the first target TOT will be scheduled. For absolute time, enter the H-hour time for the plan in the form DDHHMMZMONYY where DD is the day, HH is the hour, MM is the minute, Z is the time zone, MON is the month and YY is the year.
5,	Type **End Time**	This entry establishes the number of minutes after the plan is executed during which targets can be scheduled. For On-Call plans enter a number of minutes, For absolute time, enter the H-hour time for the plan in the form DDHHMMZMONYY where DD is the day, HH is the hour, MM is the minute, Z is the time zone, MON is the month and YY is the year.
6.	Add targets to the plan.	Targets may be added in the following manner.
NOTE Adding targets to a fire plan also adds the same targets to the On Call Target List making them available for quick fire requests.		
a.	Add from existing lists.	Perform the following:
1)	Click a target list **name** in the **Target Lists**	The name highlights.
2)	To copy the entire list to the plan, do not open lists Click the **Copy** arrow.	All targets in the list appear in the Target Number pane on the left. To add additional targets, go to step 6; if targeting is complete, go to step 7.
3)	To copy **individual** targets from the list to the plan, Click the **Open** button.	The target list opens to display individual targets in the list.
a)	Click on **targets** to be added to the plan.	The targets highlight.
b)	Click the **Copy** arrow.	Selected targets in the list appear in the Target Number pane on the left. To add additional targets, go to step 6; if targeting is complete, go to step 7.
b.	Add targets from the map.	Perform the following:
1)	Click the desired **target** symbol on the Current window.	The symbol is selected with black block at its corners.
2)	On the Fire Plan window, Click **Target\Add From Map**.	The selected target is added in the Target Number pane on the left. To add additional targets, go to step 6; if targeting is complete, go to step 7.
7.	Assign scheduling times to targets.	This can be done in either or both of the two methods described below.

SS16: Create a Fire Plan		
Step	Action	Result/Explanation
a.	Schedule by times relative to start time.	Targets can be scheduled to the plan's start time.
1)	Click the desired **target** number.	The target data is surrounded by a blue rectangle.
2)	Click the **Offset Time** field and type the number of minutes.	This is the number of minutes from the plan Start Time that the TOT will be assigned.
b.	Schedule by rank.	
1)	Click the desired **target** number.	The target data is surrounded by a blue rectangle.
2)	Click the **Rank** field and type the priority.	Priority or rank is a value 0 to 999. Lower values are scheduled before higher values.
NOTE If a combination of offset times and ranks are assigned in a plan, targets assigned an offset time are scheduled first and ranked targets are scheduled second in time slots that are available. If groups exist in the fire plan and a rank or offset time is assigned to a target in the group, all targets in the group automatically are assigned the same rank or offset. If series exist in the fire plan only the Offset Time of the first target can be edited. If this is changed the remaining series targets offset time is adjusted to maintain the time sequence assigned in the series.		
8.	Assign Munitions	Munitions assigned here override commander's guidance.
a.	Click the desired **target** number.	The target data is surrounded by a blue rectangle.
b.	Click **FFE Shell #1** and select the desired munitions.	Selected shell appears and Fz, if applicable, defaults.
c.	Click **Fz** and select desired fuze, if applicable.	
d.	Type **# Shells**.	Assigns quantity.
9.	Create the schedule of fires.	
a.	Click **Options\Schedule**.	The Schedule of Fires window displays.
b.	Click **Options\Calculate**.	Each target is examined against guidance as if it was a fire mission and either assigned to the schedule or left unscheduled. Scheduled targets displays as time line bars. The Unscheduled Targets field displays the number of targets that failed to be scheduled. The Total Rounds field displays the number of rounds required to fire the plan.
c.	Click **OK**.	The Schedule of Fires window closes and the Fire Plan window displays.
d.	Click **OK**.	The Fire Plan window closes.
To access the fire plan: Click **Targets\Fire Plans**, Click on the desired fire plan name and **Double Click**.		

SS17. Determine the Reason Targets Were Not Scheduled.

Conditions: Given an AFATDS workstation that is powered, with AFATDS started, activated and with the current situation displayed, a fire plan created and previously calculated, determine the reason targets were not scheduled.

SS17: Determine the Reason Targets were not Scheduled.		
Step	Action	Result/Explanation
1.	On the AFATDS Current toolbar, Click **Targets\Schedule of Fires**.	The Select Schedule of Fires window displays.
a.	Click the **name** of the fire plan.	The name highlights.
b.	Click the **OK** button.	The fire Schedule of Fires window displays.
2.	Access the Unscheduled Targets:	
a.	Click **Options\Unit Schedule**	The Unit Schedule window displays with a list of all unscheduled target numbers.
b.	Click the new target **Offset Time** field.	The target data is surrounded with a blue box and the munition fields at the bottom of the window become active.
c.	Click the **FFE Shell #1** field and select the desired shell.	
d.	Click the FFE Shell #1 **# Shells** field and type the desired volume of fire.	
NOTE Repeat steps 2.c.and d. for FFE Shell #2:		
e.	Click the **Update** button.	The target Firing Time field updates based on the volume of fire.
NOTE To add additional targets to this unit, go to step 2. If no additional target are to be added, go to step 3.		
3.	Click the **OK** button.	The Unit Schedule window closes and the Schedule of Fires window displays with the new target.
4.	Click **Options\Unscheduled Targets**.	Unscheduled Target window displays.
	Click **Target number** desired from list, Click **OK**.	Option Review window displays.
	DATA	**EXPLANATION**
a.	**Meets Mission Cutoff:**	Indicates the mission meets the guidance in **Guidances icon\ Target\ Mission Prioritization**. This indication is relative to the fire support type selected to the left.
b.	**TGT--Seg? --Unit ID--Caliber….**	This list shall display all capable and incapable options examined for the fire support type selected. This provides a diagnostic. The headings are:
c.	**Seg**?	"Y" indicates the target is segmented. "N" indicates the target is not segmented. Note: Target segmentation occurs at the controlling OPFAC; other computers will display a blank.
d.	**Range Capable icon.**	Range Capable? "Y" indicates the weapons and ammunition can range the target; "N" indicates the target is outside range.
e.	**Near Mask icon.**	Near Mask Violation? "Y" indicates a mask stored with the unit's weapon data is violated by this option. "N" indicates no mask violation.
f.	**Downrange Mask icon.**	Downrange Mask Violation? "Y" indicates downrange mask geometry is violated by this option; "N" indicates no violation.

SS17: Determine the Reason Targets were not Scheduled.		
Step	Action	Result/Explanation
g.	**Response Time Capable icon.**	Response Time Capable? "Y" indicates that considering the unit response time and all missions previously assigned of equal or greater mission value, the unit can engage before the NLT time expires.
h.	**Munitions Capable icon.**	Muniton Capable? "N" indicates the unit does not possess the ammunition for this option or the mission requires massing of fires and massing is prohibited by guidance entries.
i.	**Angle T icon**	Does not apply to MLRS.
j.	**Fire Support Coordination icon.**	Requires Coordination? "Y" requires coordination; "N" does not.
k.	**Unit Restriction icon.**	Is the unit unrestricted? "N" indicates the unit is restricted from firing the mission in System Tasks guidance.
l.	**Desired Effects icon.**	Can the unit achieve desired effects? "N" indicates desired effects requested in the FR or in the TMM guidance cannot be achieved. This is blank if the target is volleys type.
m.	**Appropriate Fire Support System icon.**	Is the FS system appropriate for the mission? Rocket/missile units are inappropriate for adjust missions.
6.	Click the **Cancel** button.	The Option Review window closes and the Unscheduled Targets window displays.

SS18. Manually Schedule Targets.

Conditions: Given an AFATDS workstation that is powered, with AFATDS started, activated and with the current situation displayed and a fire plan created and previously calculated Manually schedule targets.

Additional Information: The preferred method for scheduling targets in a fire plan is to calculate the fire plan (see procedure SS16 above). Targets can, however, be manually scheduled by assigning these to units. Manually scheduling should be used as a last resort

SS18: Manually Schedule Targets		
Step	Action	Result/Explanation
1.	On the AFATDS Current toolbar, Click **Targets\Schedule of Fires**.	The Select Schedule of Fires window displays.
a.	Click **Plan Name**, Click **OK**	Schedule of Fires window displays.
2.	Click **Unit Name** desired from list.	
3.	Click **Options\Unit Schedule**.	Unit Schedule window displays.
4.	Add an unscheduled target to the unit's schedule:	
a.	Click **Target\Add**.	The Select Target window displays with a list of all unscheduled target numbers.
b.	Click the desired **target number** and Click the **OK** button.	The Select Target window closes and the selected target is added to the Unit Schedule window after all previously scheduled targets.
c.	Click the new target **Offset Time** field.	The target data is surrounded by a blue box and the munitions fields at the bottom of the window become active.
d.	Click the **FFE Shell #1** field and select the desired shell.	

SS18: Manually Schedule Targets		
Step	Action	Result/Explanation
e.	Click the FFE Shell #1 **# Shells** field and type the desired volume of fire.	
NOTE Repeat steps 4.d. and e. for FFE Shell #2:		
f.	Click the **Update** button.	The target Firing Time field updates based on the volume of fire.
NOTE To add additional targets to this unit, go to step 4. If no additional targets are to be added, go to step 5.		
5.	Click the **OK** button.	The Unit Schedule window closes and the Schedule of Fires window displays.

SS19. Receive a Fire Plan from Higher Headquarters.

Conditions: Given an AFATDS workstation that is powered, with AFATDS started, activated and with the current situation displayed and communications established Receive a fire plan from higher headquarters.

Additional Information: The fire plan is transmitted to the FDC from a higher FDC or FSE/FSCC to the station that will be transmitting the schedule of fires.

SS19: Receive a Fire Plan from Higher Headquarters			
Step	Station	Action	Result/Explanation
1	Higher Headquarters	Transmit the fire plan.	
2.	Btry/Plt AFATDS	Receive the fire plan.	The TGT icon on the Current tool bar highlights and the counter increments.
a.		Click the **TGT** icon.	The Received Target Lists, Fire Plans, and Schedule of Fires window displays with text: Schedule of Fires name received from source unit ID
b.		Click the **text**.	That line of text highlights.
c.		Click the **Delete** button.	The text deletes.
d.		Click the **Close** button.	The Received Target Lists, Fire Plans, and Schedule of Fires window closes. When the Fire Plan is received, the operator must select to Save the plan or discard it.
3.	Btry/Plt AFATDS	Preview the fire plan.	
a.		Click **Targets\Fire Plans\Edit**.	The Select Fire Plan window displays.
b.		Click the fire plan **name** and Click the **OK** button.	The Fire Plan window displays with all targets assigned to the plan and the time sequence for firing.
c.		Click **Options\Schedule of Fires.**	The Schedule of Fires window displays with a graphic depiction of the fire plan
NOTE Those targets scheduled are portrayed as bars with a time line in 5-minute intervals displayed. Red bars indicate targets scheduled at the maximum rate of fire. Striped bars portray shift time between targets and green bars represent targets fired at the sustained rate of fire.			

SS20. Execute a Schedule of Fires.

Conditions: Given an AFATDS workstation that is powered, with AFATDS started, activated and with the current situation displayed and a fire plan stored, Execute a schedule of fires.

Additional Information: When a fire plan is requested, selecting to execute the plan can fire it. This action causes all targets in the plan to be created as TOT fire missions. The targets are also re-checked against ammunition availability and weapon status to ensure that a previously compute schedule that is no longer valid does not hinder the firing of the plan.

SS20: Execute a Schedule of Fires		
Step	Action	Result/Explanation
1.	Click **Targets\Fire Plans\Edit**.	The Select Fire Plan window displays.
2.	Click the desired fire **plan name** and Click **OK**.	The Fire Plan window displays.
3.	Click the **Execute** button.	The Confirm Target Values window displays.
a.	If missions on targets of opportunity with a higher mission value than those of the plan are to be allowed to be fired during the plan: Click the **Yes** button.	When this selection is made, AFATDS assigns a mission value based on guidance to the fire plan TOT targets.
b.	If missions on targets of opportunity with a higher mission value than those of the plan are not to be allowed to be fired during the plan: Click the **NO** button.	When this selection is made, AFATDS automatically assigns a mission value of 100 to all fire plan TOT targets.
At this point all fire plan targets are evaluated as missions. If intervention is on, the missions are queued in the IP icon of the Current tool bar.		
4.	Click the **Cancel** button on the Fire Plan window.	The Fire Plan window closes.

SS21. Trigger a Fire Plan Based on H-hour.

Conditions: Given an AFATDS workstation that is powered, with AFATDS started, activated and with the current situation displayed and a fire plan stored Trigger a fire plan based on H-hour.

Additional Information: The fire plan is triggered by a trigger event created at AFATDS. When H-Hour arrives, the Trigger Event window displays allowing the operator to execute the plan. The following additional information applies:

1. If targets are scheduled at an offset time too early to allow engagement (for example, offset time of 0 results in a TOT computed the instant the fire plan is called) these will be denied.
2. All targets in the plan are assigned a mission value of 100. This prevents missions of lower priority from interrupting the firing of the plan.

SS21. Trigger a Fire Plan Based on H-hour		
Step	Action	Result/Explanation
1.	Create the Trigger Event.	
a.	On the Current menu tool bar, Click **Events** Icon	The Trigger Event List window displays.
b.	Click the **New** button.	The Trigger Event window displays.

SS21. Trigger a Fire Plan Based on H-hour		
Step	Action	Result/Explanation
c.	Click in the **Trigger Event**: field and type the name.	1 to 20 characters, letters or numbers. Spaces may be included.
d.	Click the **DTG-Related** button.	Trigger event is set to be performed on a time setting.
e.	Click the **Trigger Time (DTG):** field and type the **H-Hour time**.	Time is entered in the form DDHHHHZMMMYY where DD is the day, HHHH is the Z is the time zone, MMM is the month and YY is the year.
NOTE The selection described below appears "grayed out." A selection is made Clicking in the blank field to the right of the selection and not the check box to the left. After a selection is made, the check box selects automatically to indicate the action is active when the trigger event is reviewed.		
f.	Click the **Execute Fire Plan** field and Select…	The Select Fire Plan window displays.
g.	Click the **name** of the fire plan and Click the **OK** button.	The name appears in the Execute Fire Plan field and the check box displays a check.
h.	Click the **Comments** field and type a description and any notes concerning the trigger event.	This data is presented for review when the trigger is tripped.
i.	Click the **State** button and select **Set**.	The trigger event is activated.
j.	Click **OK**.	Trigger Event list displays. Displays new Trigger Event with State equal to Set.
k.	Click **OK**.	The Trigger Event List window closes.
2.	React when a trigger event is tripped.	
a.	AFATDS sounds a beep and the Medium Level Alert List displays. The Trigger Event window also displays.	The event is triggered by the time. Other Trigger events may be tripped through movement of a unit, target, etc. reported by received data or moved by the operator into a specific geometry.
NOTE The Trigger Event window will not automatically display if the Medium Level Alerts List is already open. If this is the case, when the beep is heard, Click the **Refresh** button on the Medium Level Alerts List and display the trigger event by Clicking the event **name** in the list and selecting the View button.		
b.	Click the **Execute** button.	The Trigger Event window closes. The fire plan executes. All targets on in the plan are converted to TOT missions.

Chapter 4. Reports/Requests, Planning and Commander's Guidance

General.
When AFATDS is directly communicating with the Fire Control System (FCS) on the MLRS SPLL, AFATDS is able to query and receive database information from the SPLL.

AFATDS supports the staff planning process however this level of planning is outside the scope of battery/platoon operations and only disseminated to all units to be put into use.

Some guidance's are used to determine HOW or WHEN to shoot the target. They allow targets to be prioritized relative to one another as well as provide information on what kinds and volume of munitions or what effects to use on the target.

How to use this chapter. Chapter 4 describes the processes used to retrieve and transmit database information, fire targets in a fire plan and set parameters for selected guidance's used during fire mission processing.
Section I Describes, in detail the tasks executed at the Battery/Platoon FDCs to process to request and transmit database information.
Section II Describes, in detail the tasks executed at the Battery/Platoon FDCs to provide fires during Fire Planning.
Section III Describes, in detail the tasks executed at the Battery/Platoon FDCs to provide selected guidance's for fire mission processing.

Section I. Reports and Requests.

PG1: Request Data from a SPLL

Conditions: Given an AFATDS workstation that is powered, with AFATDS started, activated and communications established with a SPLL Request data from a SPLL.

Additional Information: This procedure queries the FCS database and returns information that is stored at AFATDS.

PG1: Request Data from a SPLL			
Step	Action	Result/Explanation	
1	On the AFATDS Current toolbar, Click the **FCS Weapons Status** icon.	The FCS Weapon Status window displays.	
2	Click the **name** of the SPLL in **the Unit ID** column.	The name highlights and the Request Status button activates.	
3.	Click **Request Status**...	The FCS Request Message displays.	
4.	Click the **Data Requested**: field and select the type of information requested.	The Data Requested: field displays the selected entry.	
5.	Click the **Send** button.	The request is transmitted.	
6.	Click the **Cancel** button.	The FCS Request Message closes.	
The following is a list for possible data requests and the resulting data returned.			
Data Request:	FCS Action:	SPLL Response:	AFATDS Action:
SPLL Status	Audible alarm sounds and REQUEST MESSAGE FROM PLT displays. When ALM ACK is pressed LAUNCHER	Launcher status is sent to AFATDS.	AFATDS updates launcher location, weapon status, Inop reason if the weapon is degraded or inoperable and current point ID.

PG1: Request Data from a SPLL			
Step	Action	Result/Explanation	
	STATUS MESSAGE TRANSMITTED displays.		
Reload Point Location	Audible alarm sounds and REQUEST MESSAGE FROM PLT displays. When ALM ACK is pressed DATABASE MESSAGE TRANSMITTED displays.	The requested point data is transmitted to AFATDS.	AFATDS stores the point data and the Ge: field increments with an alert Update to MOVEMENT_GRAPHICS geometry received in the Current Situation, and the name of the geometry.
If a reload, firing point, or survey control point are requested without specifying a point number, the FCS returns a Free-text message indicating the message was rejected.			
Firing Point Location	Audible alarm sounds and REQUEST MESSAGE FROM PLT displays. When ALM ACK is pressed DATABASE MESSAGE TRANSMITTED displays.	The requested point data is transmitted to AFATDS.	AFATDS stores the point data and the Ge: field increments with an alert Update to MOVEMENT_GRAPHICS geometry received in the Current Situation, and the name of the geometry.
Rendezvous Point	Audible alarm sounds and REQUEST MESSAGE FROM PLT displays. When ALM ACK is pressed DATABASE MESSAGE TRANSMITTED displays.	The requested point data is transmitted to AFATDS.	AFATDS stores the point data and the Ge: field increments with an alert Update to MOVEMENT_GRAPHICS geometry received in the Current Situation, and the name of the geometry.
Survey Control Point Location	Audible alarm sounds and REQUEST MESSAGE FROM PLT displays. When ALM ACK is pressed DATABASE MESSAGE TRANSMITTED displays.	The requested point data is transmitted to AFATDS.	
Masking Data	Audible alarm sounds and REQUEST MESSAGE FROM PLT displays. When ALM ACK is pressed DATABASE MESSAGE TRANSMITTED displays.	The requested point data is transmitted to AFATDS.	
Hide Location	Audible alarm sounds and REQUEST MESSAGE FROM PLT displays. When ALM ACK is pressed DATABASE MESSAGE TRANSMITTED displays.	The requested point data is transmitted to AFATDS.	AFATDS stores the point data and the Ge: field increments with an alert Update to MOVEMENT_GRAPHICS geometry received in the Current Situation, and the name of the geometry.
Location Database Update	Audible alarm sounds and REQUEST MESSAGE FROM PLT displays. When ALM ACK is pressed DATABASE MESSAGE TRANSMITTED displays.	All stored point data is transmitted to AFATDS in one message.	AFATDS stores the point data and the Ge: field increments with an alert, Update to MOVEMENT_GRAPHICS geometry received in the Current Situation and name of the geometry is posted, a Free-text message is also received with all point data. This message can be printed to provide a written record.
Configuration	Audible alarm sounds and REQUEST MESSAGE FROM PLT displays. When ALM	Launcher status is sent to	AFATDS updates launcher location, weapon status, Inop reason if the weapon is degraded or inoperable and current point ID.

PG1: Request Data from a SPLL			
Step	Action	Result/Explanation	
	ACK is pressed LAUNCHER STATUS MESSAGE TRANSMITTED displays.	AFATDS.	
NOTE On naming of geometry: If geometry is received from the SPLL, it is named based on the following: The first five letters of the name are the first five characters of the SPLL unit ID. The last five characters are an abbreviation for the point type (HP for hide point, FP for firing point, RZ for rendezvous point, RL for reload point) followed by the point ID.			

PG2: Direct a SPLL to Move to a Reload Point.

Conditions: Given an AFATDS workstation that is powered, with AFATDS started, activated and communications established with a SPLL, deploy a SPLL to a reload point.

Additional Information: This procedure allows AFATDS to issue move orders to the SPLL. Because of the additional information required, movement to a reload point is discussed separately. All other move orders are discussed in procedure PG3.

PG2: Direct a SPLL to Move to a Reload Point			
Step	Station	Action	Result/Explanation
1.	Btry/Plt AFATDS	On the AFATDS Current toolbar, Click the **FCS Weapons Status** icon.	The FCS Weapon Status window displays.
a.		Click the **name** of the SPLL in the Unit ID column.	The name highlights and the SPLL Command button activates.
b.		Click **SPLL Command**	The SPLL Commands window displays.
c.		Click the **Command Type Code:** field and select **Send to Reload Point.**	The Command Type Code: field displays the selected entry.
d.		Click the LP/C1 **Reload Command** field and select the action the SPLL will perform at the reload point.	Selections are: Unload, unload launch pod container 1. Reload, reload launch pod container 1; this selection causes the Warhead Type field to become active. No Change, maintain current ammunition load in container 1.
If Reload was selected in step 1.c, go to step 1.e. If Unload or No Change was selected in step 1.d., go to step 1.g.			
e.		Click the **Warhead Type** field and select the ammunition type to reload.	
f.		**Number of Rounds** field quantity automatically fills with the value for munitions category.	
g.		Click the **LP/C2** Reload Command field and select the action the SPLL will perform at the reload point.	Selection is automatically filled with the values selected for LP/C1.

PG2: Direct a SPLL to Move to a Reload Point			
Step	Station	Action	Result/Explanation
If Reload was selected in step 1.g, go to step 1.h If Unload or No Change was selected in step 1.g., go to step 1.j.			
h.		**Warhead Type**	Selection is automatically filled with the values selected for LP/C1..
i.		**Number of Rounds**	Selection is automatically filled with the values selected for LP/C1.
j.		Click the **Location Point ID:** field.	A list is displayed of all stored point IDs for the type.
k.		Select the desired **point ID.**	All relevant location fields are automatically filled based on the point ID. If point ID is not available, operator inputs may be entered along with the Location: field.
l.		Click the **Send** button.	The request is transmitted. Go to step 2.
2.	SPLL	Receives the command message.	The audible alarm sounds. When the ALM ACK button is pressed the location and ammunition to reload display.
a.		SPLL responds.	The FCS operator transmits “Will Comply” or Cantco.
3.	Btry/Plt AFATDS	Mailbox icon counter increments.	
a.		Click the **Mailbox** icon.	The Messaging Main Menu window displays.
b..		Click the **date-time group** of the most recent message.	The User View window displays with the message: Request----------RESPONSE Type of Message Receive--------Command Response Code----------WILL COMPLY Or Response Code----------CANNOT COMPLY

PG3: Direct a SPLL to Move to a Firing, Rendezvous, Move, Survey Control or Hide Point.

Conditions: Given an AFATDS workstation that is powered, with AFATDS started, activated and communications established with a SPLL, direct a SPLL to deploy to a Firing, Rendezvous, Move, Survey Control or Hide Point.

PG3: Direct a SPLL to move to a Firing, Rendezvous, Move, Survey Control or Hide Point.			
Step	Station	Action	Result/Explanation
1.	Btry/Plt AFATDS	On the AFATDS Current toolbar, Click the **FCS Weapons Status** icon.	The FCS Weapon Status window displays.
a.		Click the **SPLL Command**… button.	The SPLL Commands window displays.
b.		Click the **Command Type Code**: field and select the desired command.	Applicable commands for this procedure are Send to Firing Point, Send to Rendezvous Point, Send to Move Point or Send to Survey Control Point.
If the command selected is <u>not</u> Send to Move Point, go to set 1.c. If the command selected is Send to Move Point, go to set 1.f.			
c.		Click the **Location Point ID:** field.	A list is displayed of all stored point IDs for the type.
d.		Select the desired **point ID.**	All relevant location fields are automatically filled based on the point ID.
e.		Click the **Send** button.	The request is transmitted. Go to step 2.

PG3: Direct a SPLL to move to a Firing, Rendezvous, Move, Survey Control or Hide Point.			
Step	Station	Action	Result/Explanation
f.		Click the **Location** field and type the grid to which the SPLL will move.	
g.		Click the **Send** button.	The request is transmitted. Go to step 2.
2.	SPLL	Receives the command message.	The audible alarm sounds. When the ALM ACK button is pressed the location and ammunition to reload display.
a.		SPLL responds.	The FCS operator transmits “Will Comply” or Cantco.
3.	Btry/Plt AFATDS	Mailbox icon counter increments.	
a.		Click the Mailbox icon.	The Messaging Main Menu window displays.
b.		Click the **date-time group** of the most recent message.	The User View window displays with the message: REQUEST……RESPONSE RESPONSE CODE…….WILL COMPLY Or RESPONSE CODE….CANNOT COMPLY

Section II. Plans and Orders.

1. **AFATDS Planning** process. AFATDS supports the staff planning process. This is accomplished by the development and evaluation of fire support courses of action in future plans. This level of planning is outside the scope of battery/platoon operations. However, the products of the plan are normally disseminated to all units to be put into use.
2. Commander’s Guidance. Part of the AFATDS planning develops guidance.

PG4: Receive a Plan from Higher or Supported HQ.

Conditions: Given an AFATDS workstation that is powered, with AFATDS started, activated and communications established with the higher or supported headquarters, receive a plan from the higher or supported headquarters.

Additional Information: Plan data may be transferred in bulk or in multiple transfers. The higher headquarters decides the method based on the capability and reliability of the communications links. Multiple transfers will result in this procedure being executed more than one time for a plan.

PG4: Receive a Plan from Higher or Supported Headquarters			
Step	Station	Action	Result/Explanation
1	Supported of Higher HQ	Transmit plan data.	
2.	Btry/Plt AFATDS	Low level alert queues.	
a.		Click L: low level alert button.	The Low Level Alert List window displays with Source: Guidance Manager Description: Received Plan Notification
b.		Click the **alert**.	That line of text highlights.
c.		Click the **View** button.	The Alert Message window displays with Plan (NAME) received; ready to preview.
d.		Click the **OK** button.	The Alert Message window closes
e.		Click the **alert**.	That line of text highlights.
f.		Click the **Delete** button.	The alert deletes.

PG4: Receive a Plan from Higher or Supported Headquarters			
Step	Station	Action	Result/Explanation
g.		Click the **OK** button.	The Low Level Alerts List window closes.
3.	Btry/Plt AFATDS	Preview the plan.	
a.		Click Situations, Received Plans/Current	The Received Plans Current window displays with the plan listed.
b.		Click the **plan name**.	The plan name highlights.
c.		Click the **Preview** button.	The Received Plan window displays. All data received in the plan is listed by type. Each type may be selected by Clicking the name and viewed by Clicking the View button
NOTE Data of a specific type (Guidance, Geometry, etc) may be deleted by selecting the delete button for that type or viewed by selecting the View button for the type. Deletion not be carried out as it removes data from the unit's copy of a plan of a higher headquarters			
4.	Btry/Plt AFATDS	Click the **Save** button.	The plan data is saved and the Received Plans Current window re-displays with a blank list.
a.		Click **OK**.	The Received Plans Current window closes.

PG5 Implement a Plan from Higher or Supported HQ.

Conditions: Given an AFATDS workstation that is powered, with AFATDS started, activated and with the plan stored, "Implement" plan from the higher or supported headquarters.

Additional Information: Implementing a plan is done at the direction of a higher headquarters. Part or the entire plan may be implemented. The act of implementing the plan causes the plan guidance and geometry to be implemented into the current plan. Units that exist in the plan but not in the current situation are copied into the current situation. The locations of current existing units are not changed by the plan implementation.

PG5: Implement a Plan from Higher or Supported Headquarters			
Step	Station	Action	Result/Explanation
1	Supported or Higher HQ	Order the implementation of a plan and phase.	This can be accomplished via free-text message or voice comm.
2.	Btry/Plt AFATDS	Implement the plan.	
a.		Click **Situations\Implement Plan.**	The Select Plan and Phase window displays with the plan listed.
b.		Click the **plan name**.	The plan name highlights and the Phase list display the number of each phase associated with the plan.
c.		Click the **phase** directed for implementation in the **Phase list**.	The phase number highlights.
d.		Click the **OK** button.	The Implement Plan window displays
e.		Click the **Information Type** button and select All Data.	This implements all received data at once.
f.		Click the **Implement button**	The Confirm Implement window displays.

PG5: Implement a Plan from Higher or Supported Headquarters			
Step	Station	Action	Result/Explanation
g.		Click the **Implement button**.	The Implement Plan window closes. A low level alert queues indicating: Implementation of Plan: (NAME) Phase: (#) COA: (#) has completed successfully.

PG6 Receive a Movement Order from Higher or Supported HQ.

Conditions: Given an AFATDS workstation that is powered, with AFATDS started, activated and communications established with the higher or supported headquarters, Receive a movement order from the higher or supported headquarters.

Additional Information: A unit move calculated at a higher headquarters results in a movement order that contains routes and directions for a unit to move from one position to another.

PG6: Receive a Movement Order Higher or Supported Headquarters			
Step	Station	Action	Result/Explanation
1	Supported of Higher HQ	Transmit the move order.	
2.	Btry/Plt AFATDS	Low level alert queues.	
a.		Click **low level alert** button.	The Low Level Alert List window displays with Source: Unit Manager Description: Data Received
b.		Click the alert.	That line of text highlights.
c.		Click the **View** button.	The Alert Message window displays: Fact Type: Unit Move
d.		Click the **OK** button.	The Alert Message window closes
e.		Click the **alert**.	That line of text highlights.
f.		Click the **Delete** button.	The alert deletes.
g.		Click the **OK** button.	The Low Level Alerts List window closes.
3.	Btry/Plt AFATDS	View the Move Order.	
a.		Display the Move Order	
1)		On the Current menu, Click **Move\Unit Moves Table.**	The Move Request Order Table window displays.
2)		Click the **name** of your unit in the **Unit Moving** column.	The name highlights.
3)		Click the **Edit** button.	The Unit Move window displays.
b.		Review the order:	
1)		**View** the Unit Move window.	Start and end locations of the move are displayed as well as the start time. Azimuth of lay and position area to occupy may also be present.
2)		Click the **Next** button.	The Movement Table Tools window displays.
3)		Click the **Move Table** button.	The Move Table window displays. Each segment of the movement, speeds on segments and delays at start, check and release points are displayed.

PG6: Receive a Movement Order Higher or Supported Headquarters			
Step	Station	Action	Result/Explanation
4)		Click the **Cancel** button.	The Move Table window closes and the Movement Table Tools window displays.
5)		Click the **Cancel** button.	The Movement Table Tools window closes and the Move Order window displays.
6)		Click the **Cancel** button.	The Move Order window closes.
7)		Click the **OK** button.	The Move Request Order Table closes.

Section III. Commander's Guidance.

How to use this section. AFATDS uses the commander's guidance in the form of several guidances. These guidances ensure the commander's intent is considered each time that a fire request is processed. At battery/platoon level the guidances are normally received from higher or supported headquarters. Guidance's received should not be modified unless the change is directed or approved by the issuing headquarters. All guidance necessary for the execution of fire missions in independent battery/platoon training exercises is provided in database construction. This section identifies the effect of specific items of guidance but does not address their creation or entry.

PG7: Explain the effect of Guidances on Fire Mission Processing.

Conditions: Given an AFATDS workstation that is powered, with AFATDS started, activated and with the current situation displayed, explain the effect of guidances on fire mission processing

Additional Information: This procedure provides a basic explanation of guidances that effect fire mission processing. The menu path to locate the guidance is provided as well as a reference to the AFATDS Operator's Notebook for additional information.

PG7: Explain the effect of Guidances on Fire Mission Processing.				
Guidance	Component	Effect	Location	ONB Reference
Target Selection Standards	Max TLE Max Report Age	Provides check of accuracy of target location (based on received TLE or defaulted value) and age of target report. Only ATI messages are checked unless the check box titled Check Calls for Fire against TSS is selected on this window. Checked when: A fire request is received from a FO.	On the AFATDS Current toolbar, **Click Guidance icon\ Target\Target Selection Standards**.	
High Value Target List		Provides a portion of mission value. Checked when: Any time a fire request or fire order is received. If different than higher headquarters, mission is	On the AFATDS Current toolbar, Click **Guidance icon\Target\ High Value Target List.**	

PG7: Explain the effect of Guidances on Fire Mission Processing.				
Guidance	Component	Effect	Location	ONB Reference
		assigned a different mission value.		
Target Manage-ment Matrix	High Payoff Targets	Specifies the high payoff targets and provides precedence, desired effects, value and identifies the need for BDA and IEW coordination.	On the AFATDS Current toolbar, Click **Guidance icon\Target\TMM High Payoff Targets.**	
	Non-High Payoff Targets	Specifies all targets not on the high payoff target list and provides precedence, desired effects and identifies the need for BDA and IEW coordination. During mission processing, AFATDS uses the precedence-desired effects for non-HPTs from this list, not the HVT list.		
	Excluded Targets	Targets that should not be engaged. The display of these is governed on this window by the Category button. The list only display excluded targets for the selected category and never shows all excluded targets at once.		
		Checked when: any time a fire request is received, if different than higher headquarters, mission is assigned a different mission value. For fire orders, precedence and desired affects are received from controlling headquarters in the fire order; mission value is checked and will be different if this guidance differs from the headquarters.		
Mission Prioritization	Mission Weight or Rank	Determines the relative values of four parts of mission value.		

PG7: Explain the effect of Guidances on Fire Mission Processing.				
Guidance	Component	Effect	Location	ONB Reference
	Mission Cutoff Factors	Provides minimum value a mission must achieve to be recommended for firing.		
	Priority of Fires	Provides relative priority of fires of requestors. Used to help determine mission value.		
	TAI Priority	Provides relative priority of TAIs. Used to help determine mission value for targets that plot inside TAIs.		
		Checked when: Any time a fire request or fire order is received. If different than higher headquarters, mission is assigned a different mission value.		
System Tasks		Used to determine munitions with which to engage target. This guidance is checked first for possible shell/fuze combinations. Checked when: Any time a fire request is received. Applies to fire orders for area mission only if the ordered munitions cannot be used to compute a capable option.	On the AFATDS Current toolbar, Click **Guidance icon\System Preference and Restrictions\System Tasks List.**	
Munitions Restrictions		Used to provide restrictive conditions that prohibit the employment of munitions. Checked when: Any time a fire request or fire order is received.	On the AFATDS Current toolbar, Click **Guidance icon\System Preference and Restrictions\Munitions Restrictions**	

PG7: Explain the effect of Guidances on Fire Mission Processing.				
Guidance	Component	Effect	Location	ONB Reference
Rocket/ Missile Attack Methods		Used to help select munitions and a volume of fire. Checked when: Any time a fire request is received and to fire orders if the directed munitions cannot produce a capable option. For fire requests or fire orders, this guidance is checked if the requested munitions, followed by any in the FS System Tasks guidance, cannot provide a capable option.	On the AFATDS Current toolbar, Click **Guidance icon\Rocket/Missile\ Attack Methods**	
Target Duplication		Used to identify targets that are already in the process of engagement. Checked when: Any time a fire request or fire order is received. The target is checked against other active targets only.	On the AFATDS Current toolbar, Click **Guidance icon\Target \Target Duplication.**	

Appendix A. Operations of the FDC.

Section I. Operations.

OP1. Establish Minimum Firing Capability.

Conditions: Given an AFATDS workstation that is loaded with AFATDS software and powered but without a database, Establish minimum firing capability.

Additional Information: The following procedures provide the minimal information and setup of the AFATDS database that is required to achieve the ability to fire. These procedures are severely abbreviated. Though a firing capability will exist, the following will not occur:

1. Fire support coordination checks.
2. Mask checks.
3. Checks for intervening crests.
4. Digital communications.

Procedure	Explanation
DB1 Construct FDC/POC Unit Data	
DB3 Construct SPLL Unit Data	
DB4 8 Store Uploaded Ammunition	Normally reported by SPLL; entry required to conduct training without SPLLs.
DB8 Establish Target Decay Time	
DB12 Create a Planned Communications Configuration	
DB12 Edit a Planned Communications Configuration	
DB12 Create a FCS radio or Wire Network.	
DB12 Select a Current Communications Configuration	
DB12 Assign a Network to a Communications Channel	
DB12 Turn on a Network	

Glossary

AFATDS – Advanced Field Artillery Tactical Data System.
ATACMS – Army Tactical Missile System, the family of missiles supported by MLRS.
ATI – Artillery Target Intelligence
BPS – Bits-per-seconds, a measure of the rate at which data is transmitted.
CCU2 – Compact Computer Unit 2, Common Hardware Suite II.
BAT – Brilliant Ant-Tank submunitions, an MLRS ATACMS delivered anti-tank weapon.
DB – Database
FCS – Fire Control System, the fire control computer of the MLRS M270 and M270A1 SPLL.
FFZ – Firefinder Zones.
FSE – Fire support element, a role AFATDS assumes to process target data and fire missions.
HPT – High payoff target
Keytime – The time interval during which a signal is sent to a communications device (e.g., radio) to allow the device to power to a level capable of transmitting.
LMM – Loadable Munitions Module, a software module that is accessed by AFATDS to compute effects, target segmentation, air space coordination measures and flight characteristics for missiles and EFOG-M.
Max Ord – Maximum Ordinate is the highest point on a trajectory.
MDP - (Meteorological Datum Plane), a plane tangent to the surface of the earth at the meteorological station location. This is the altitude of the met station and height from which the met message surface data was measured.
MFR – Mission Fired Report, generated by AFATDS at the completion of a fire mission.
MGRS – Military Grid Reference System, a map coordinate system that specifies coordinates in the form of grid zone numerical followed by grid zone letters designator, 100,000 meter square designator and 10 digit coordinate inside the 100,000 meter square.
MLRS – Multiple Launched Rocket System
MTO – Message To Observer
MUL – Master Unit List.
PKG 11 – See Package 11.
Package 11 – A tactical communications protocol and message set designed to replace Tacfire and bridge the gap to JVMF.
SCP – Survey Control Point
SPLL – Self-propelled Loader Launcher.
SPTCIM – Standard Protocol Tactical Communications Interface Module.
Suppression – Fires delivered against a target to prevent the target from accurately employing its weapons and inhibit its ability to operate. AFATDS uses a 3% effects as the munitions effectiveness calculated for suppressive fires.
Tacfire – A radio or wire data communications protocol characterized by FSK data transmission and specific “Tacfire” message set.
TAI – Target Area of Interest, area geometry used by AFATDS to weight the value of a target located within the geometry.
TMM – Target Management Matrix, a target guidance stored in AFATDS that includes the high-payoff target list and a list of all targets excluded from attack.
TSS – Target Selection Standards, a guidance AFATDS uses to determine if target data is timely and accurate enough for attack. All ATI messages and, at the operator’s discretion, fire missions are checked against TSS.
UCU2 – Ultra Computer Unit 2, an upgrade of the UCU to support A99 and especially, A99 FDD software.
UTM- Universal Transversal Mercator, a map system using coordinates in numerical form. The system divides the world into 60 grid zones and measures coordinates as departures from the center line of the grid zone for easting and the equator for northing.